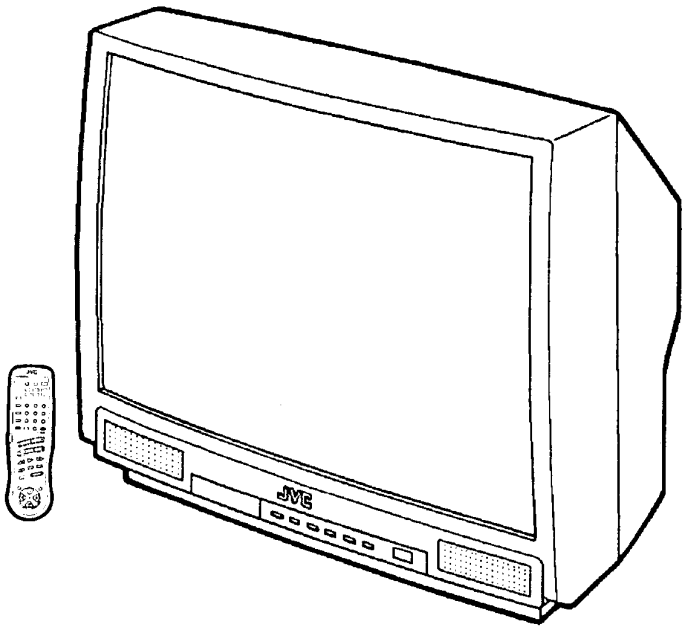
JVC

SERVICE MANUAL

COLOR TELEVISION

AV-35BP6(US&CA)

BASIC CHASSIS
GK



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No.50953
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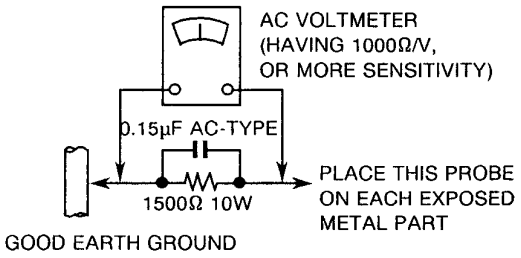
SPECIFICATIONS

Item	Content
Dimensions (W×H×D)	33-7/8"×30-1/8"×23-3/4" / 86.0cm×76.5cm×60.3cm
Mass	151.2lbs/68.7kg
TV System and Color, Sound System	
TV RF System	CCIR(M)
Color, Sound System	NTSC, BTSC (Multichannel Sound)
TV Receiving Channels and Frequency	
VL Band	(02~06) 54MHz~88MHz
VH Band	(07~13) 174MHz~216MHz
UHF Band	(14~69) 470MHz~806MHz
CATV Receiving Channels and Frequency (Quartz Synthesizer System)	
Low Band	(02~06,) by (02~06)
High Band	(07~13) by (07~13)
Mid Band	(A~I) by (14~22)
Super Band	(J~W) by (23~36)
Hyper Band	(W+1~W+28) by (37~64) (54MHz~804MHz)
ULTRA Band	(W+29~W+84) by (65~94,100~125)
Sub Mid Band	(A-8, A-4~A-1) by (01, 96~99)
TV / CATV Total Channel	180 Channels
Intermediate Frequency	
Video IF Carrier	45.75MHz
Sound IF Carrier	41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Antenna terminal	75Ω (VHF / UHF) Terminal, F-Type Connector
Power Input	120V AC, 60Hz
Power Consumption [US]	135W (max.) ,95W (avg.)
Input current [CA]	1.8A
Picture Tube	35"(89cm) measured diagonally, Full Square
Viewable Picture Size (W×H)	28"×21" / 71.1cm ×53.3cm
High Voltage	31kV ±1.3kV (at zero beam current)
Speaker	3-3/16"×4-3/4" (8×12cm) Oval Type, ×2
Audio Power Output	3W+3W
Input (1, 2)	Video : 1 Vp-p 75Ω (RCA pin jack) Audio : 500 mV rms (-4dBs), High Impedance (RCA pin jack)
S-VIDEO IN	Y:1 Vp-p positive (negative sync provided,when terminated with 75Ω) C:0.286 Vp-p (burst signal, when terminated with 75Ω)
Variable / Fix Audio Output	Variable : More than 0~1550mV rms (+6dBs) Low Impedance (400Hz when modulated 100%) (RCA pin jack) Fix : 500 mV rms (-4dBs) Low Impedance (400Hz when modulated 100%) (RCA pin jack)
AV Compulink Input	RECEIVER / AMP : 3.5mm mini jack VCR ONLY : 3.5mm mini jack
Remote Control Unit	RM-C729 (AAA/R03 dry battery ×2)

Design & specification subject to change without notice.

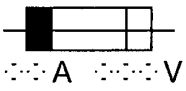
SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection,no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contrained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and ISOLATED(NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B_1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs,metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
    (1) **Dielectric Strength Test**
    The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
    (. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
    This method of test requires a test equipment not generally found in the service trade.
    (2) **Leakage Current Check**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
    • **Alternate Check Method**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit"**.

This mark shows a fast operating fuse, the letters indicated below show the rating.



FEATURES

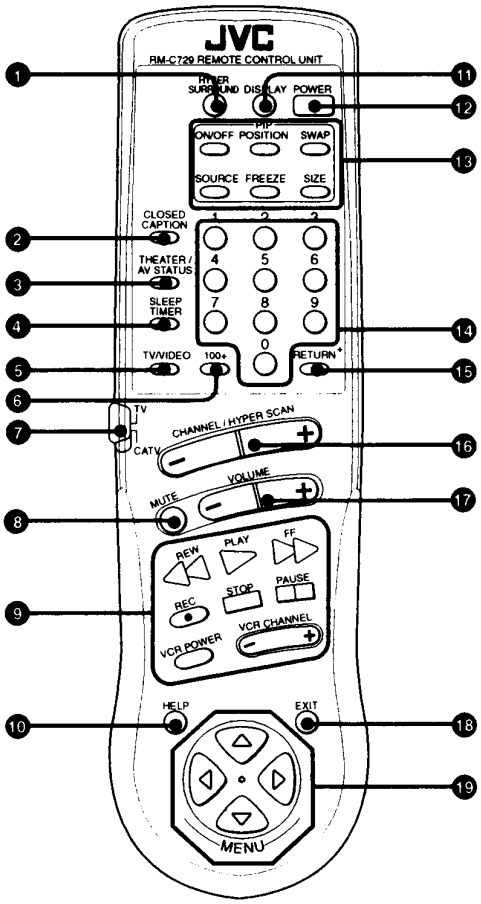
- New chassis design enables use of a main board with simplified circuitry.
- Comb filter improved picture quality.
- Provided with miniature tuner (TV / CATV)
- Full-square CRT (cathode ray tube) reproduces fine textured picture in every detail.
- PLL synthesizer system TV / CATV totaling 180 channels.
- AV COMPU LINK terminals allow simultaneous mode switching of the TV, connected receiver (or amplifier) and/or VCR.
- Closed-caption broadcasts can be viewed.
- With AUDIO. VIDEO INPUT terminal.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable audio output terminal.
- Built-in PIP system.
- An auto demonstration function demonstrates the features of this model.
- I^2C bus control utilizes single chip ICs.

OPERATING INSTRUCTIONS

■ The operating instructions are the same as for AV-27BP6(US&CA), AV-27BM6(US&CA), AV-2796S(CA), AV-2776S(CA) (No.50951). Therefore, please refer to the AV-27BP6(US&CA), AV-27BM6(US&CA), AV-2796S(CA), AV-2776S(CA) (No.50951) SERVICE MANUAL for detailed instructions.

Locations of Remote Control buttons

— AV-27BP6, AV-31BP6, AV-35BP6, AV-27BM6, AV-31BM6



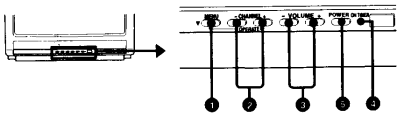
Note:

- These illustrations show the AV-27BP6/AV-31BP6/AV-35BP6 remate control.
  The AV-27BM6/AV-31BM6 remote control has the same layout but has no PIP buttons.

❶	HYPER SURROUND button	p.16
❷	CLOSED CAPTION button	p.22
❸	THEATER/AV STATUS button	p.16
❹	SLEEP TIMER button	p.20
❺	TV/VIDEO button	p.10
❻	100+ button	p.10
❼	TV/CATV selector	p.26
❽	MUTE button	p.17
❾	VCR operation buttons	p.26
❿	HELP button	p.14
⓫	DISPLAY button	p.22
⓬	POWER button	p.8
⓭	PIP buttons (except AV-27BM6, AV-31BM6)	p.12
⓮	Number keys	p.10
⓯	RETURN+ button	p.18
⓰	CHANNEL/HYPER SCAN (–/+) button	p.10
⓱	VOLUME (–/+) button	p.11
⓲	EXIT button	p.14
⓳	MENU (▼▲◀▶) buttons	p.14

Locations of TV Buttons and Parts

FRONT PANEL

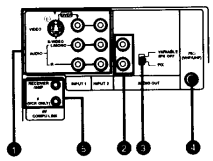


● MENU (▼) button	p.6
● OPERATE (◀ ▶)/CHANNEL (-/+) buttons	p.6,10
● VOLUME (-/+) buttons	p.11
● POWER/ON TIMER lamp	p.8, 20
● POWER button	p.8

How to use the MENU (▼) button:
- Press this button to display a list of functions. Press this button again to select the desired function from the list, then make a selection using OPERATE (◀ ▶)/CHANNEL (-/+).
- To use other buttons, refer to the respective page of this user guide.
- The front panel does not have a MENU ▲ button or EXIT button. To select the menu functions, use the MENU ▼ button. To release MENU mode, use the VOLUME button.
- You cannot set SET LOCK CODE, TIME GUARD, or channel guard from the front panel.
- When you activate MENU mode from the front panel, the first page of the FRONT PANEL CONTROL menu is displayed. Other than the first page, menus accessed from the front panel are the same as menus accessed from the remote control (refer to page 14).

Note:
- These illustrations show the AV-27BP6 front and rear panels. Other models have the same layout as the AV-27BP6, but the AV-27BM6/AV-31BM6/ AV-2776S rear panel has no INPUT 2, AV COMPU LINK jack.

REAR PANEL



● INPUT jacks	p.23
● AUDIO OUT jacks	p.23
● AUDIO OUT switch	p.23
● Antenna terminal	p.7
● AV COMPU LINK jacks (except AV-27BM6, AV-31BM6, AV-2776S)	p.24

Notes (also refer to "CONNECTION" on pages 23 to 25):

AUDIO OUT jacks:
Outputs the sound of the picture appearing on the TV.
Refer to page 23.

INPUT jacks:
- Audio output from monaural equipment should be connected to the L/MONO jack.
- Connect nothing to the S-VIDEO jack when using the VIDEO INPUT 1 jack.

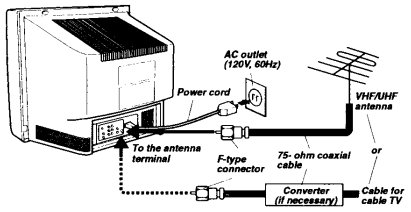
Antenna terminal:
Refer to page 7.

PREPARATION

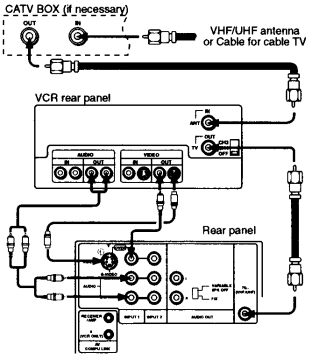
1. Connecting antenna and power cord

Conditions:
- Before connecting external devices, be sure to disconnect the TV from the AC outlet.
- When you want to use a connected device such as a VCR, change the TV input mode using TV/VIDEO. Refer to step 2 on page 10.

(Example) no VCR connected



(Example) VCR connected



Notes:
- When connecting both a cable (75-ohm coaxial) and a UHF antenna (300-ohm feeder), use an optional antenna mixer (CE41467) to make a single connection. With this antenna mixer, reception of cable channels higher than "Channel W+17" is not possible.
- The power cord has a polarized plug. Therefore, it will only fit one way into the wall outlet. DO NOT DEFEAT THE POLARIZED PLUG. If you have problems, consult your local dealer.
- Some cable companies require a converter box to receive any programs at all. Others require it for subscription or "premium" programming. Consult your local cable company for correct installation.

Notes:
- Refer to the manuals provided with the other devices.
- Interference from connected devices can affect picture quality to deteriorate. If picture noise occurs, turn off devices that you are not using or move them further apart.
- Connect the video signal of an S-VHS VCR to the S-VIDEO jack.

SPECIFIC SERVICE INSTRUCTIONS

REPLACEMENT OF CHIP COMPONENT

■CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

■SOLDERING IRON

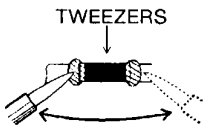
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■REPLACEMENT STEPS

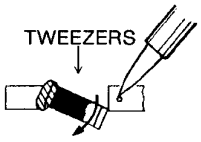
1. How to remove Chip parts

•Resistors, capacitors, etc

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

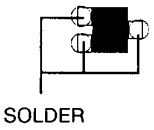


(2) Shift with tweezers and remove the chip part.

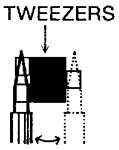


•Transistors, diodes, variable resistors, etc

(1) Apply extra solder to each lead.



(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

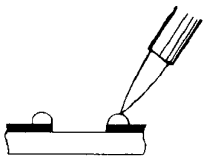


Note: After removing the part, remove remaining solder from the pattern.

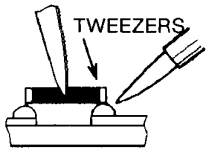
2. How to install Chip parts

•Resistors, capacitors, etc

(1) Apply solder to the pattern as indicated in the figure.



(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

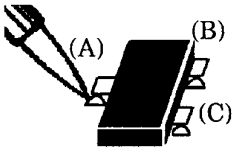


•Transistors, diodes, variable resistors, etc

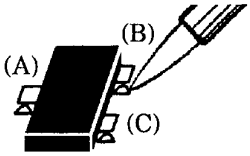
(1) Apply solder to the pattern as indicated in the figure.

(2) Grasp the chip part with tweezers and place it on the solder.

(3) First solder lead A as indicated in the figure.



(4) Then solder leads B and C.



DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Unplug the power supply cord and remove the eleven screws marked Ⓐ as shown in the Fig. 3.

- When reinstalling the rear cover, carefully push it inward after inserting the chassis into the rear cover groove.

REMOVING THE CHASSIS

- After removing the rear cover.

1. Slightly raise the both sides of the chassis by hand and remove the two claws under the both sides of the chassis from the front cabinet.
2. Draw the chassis backward along the rail in the arrow direction marked Ⓑ as shown in the Fig. 3.
   (If necessary, take off the wire clamp, connectors etc.)

- When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

REMOVING THE FRONT CONTROL KNOB

- After removing the rear cover & chassis.

1. Remove the claws marked Ⓒ by widening slightly in the direction of arrow in the Fig. 3.
2. Remove the FRONT CONTROL KNOB in the direction of arrow marked Ⓓ by keeping claws Ⓒ released.

- Claws Ⓒ may break if widening excessively. Take a full care when widening.

REMOVING THE TERMINAL BOARD & AV SELECTOR PWB

- After removing the rear cover & power cord stopper.

1. Remove the two screws marked Ⓔ as shown in the Fig. 3.
2. While widening the four claws marked Ⓕ& Ⓖ, remove the TERMINAL BOARD in the arrow direction marked Ⓗas shown in Fig.1.
3. Raise the AV SELECTOR PWB in the arrow direction marked Ⓘ as shown in Fig. 1.
4. The connector (CN003) will then be free and the AV SELECTOR PWB can be removed.

REMOVING THE PIP MODULE

- After removing the rear cover & chassis.

1. While widening the claws marked Ⓙ as shown in Fig. 2.
2. Raise the PIP MODULE in the arrow direction marked Ⓚ as shown in Fig. 2.
3. The connector (CN001, CN002) will then be free and the PIP PWB can be removed.

CHECKING THE PW BOARD

1. To check the back side of the PW Board.
   1) Pull out the chassis. (Refer to REMOVING THE CHASSIS) .
   2) Erect the chassis vertically so that you can easily check the back side of the PW Board.

[CAUTION]

- When erecting the chassis, be careful so that there will be no contacting with other PWB.
- Before turning on power, make sure that the wire connector is properly connected.

WIRE CLAMPING AND CABLE TYING

1. Be sure to clamp the wire.
2. Never remove the cable tie used for tying the wires together. Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

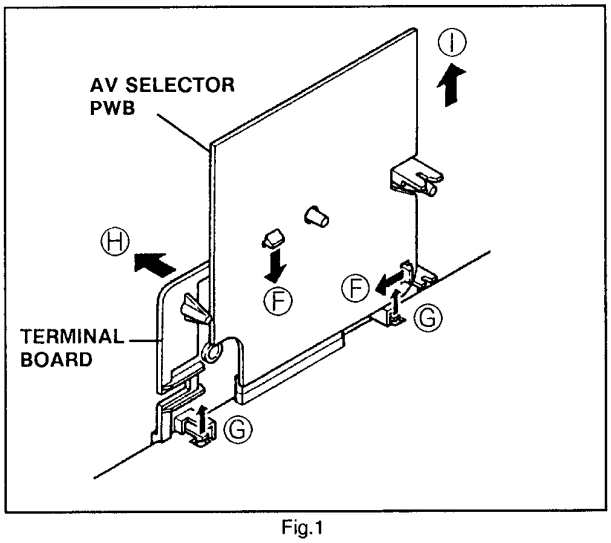


Fig.1

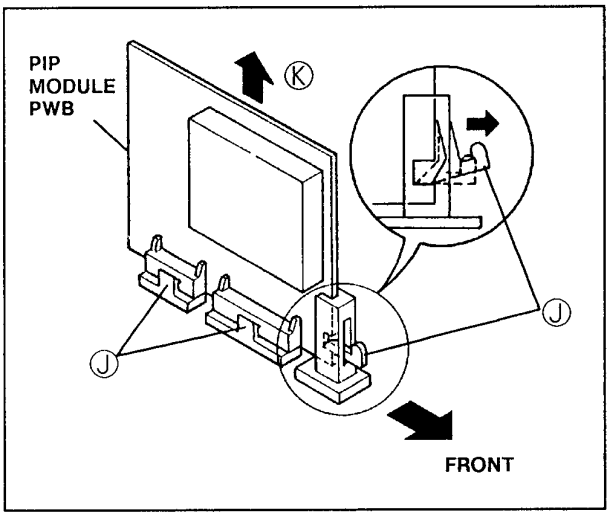


Fig.2

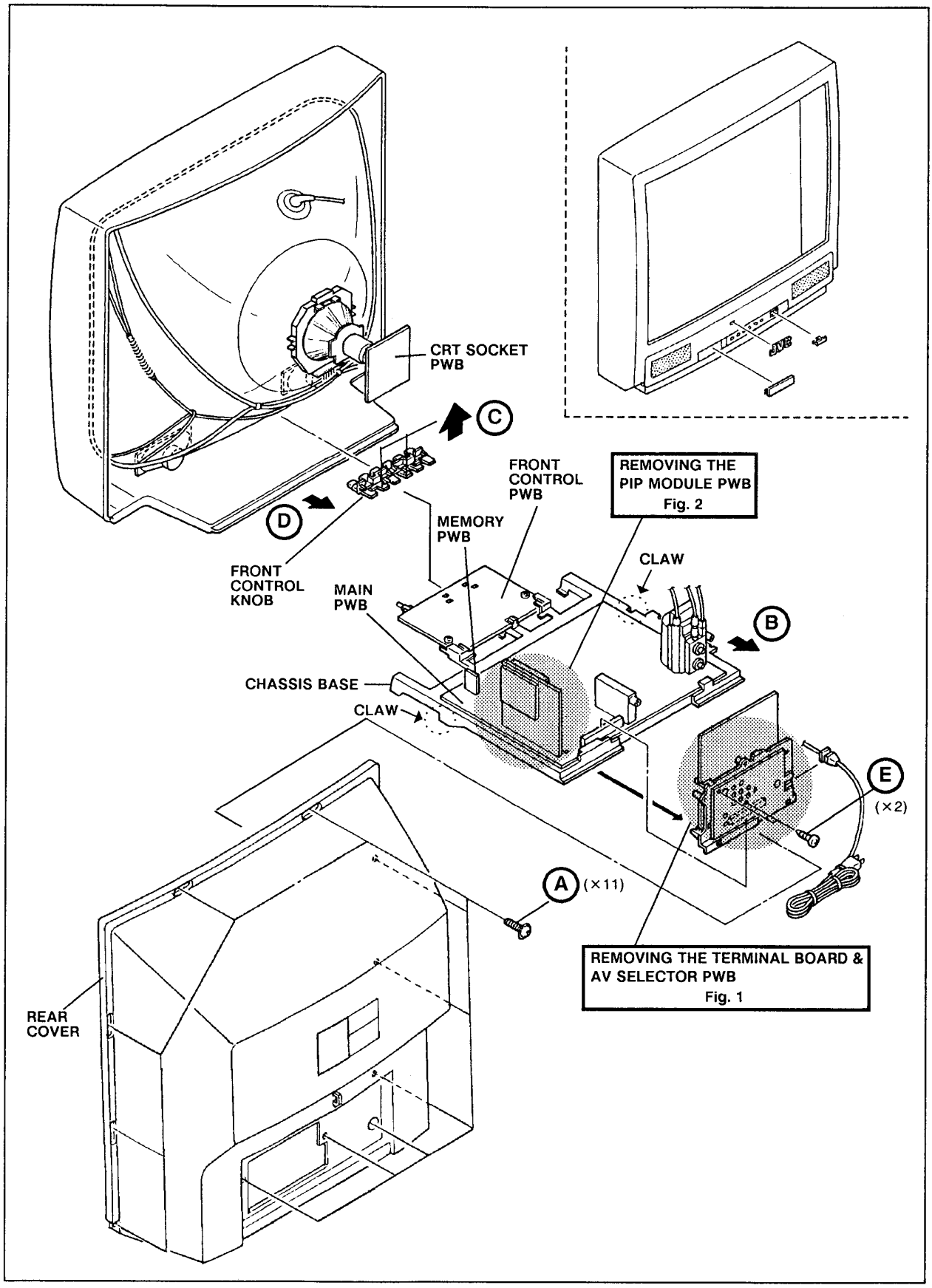

CRT SOCKET PWB
C
D
FRONT CONTROL PWB
REMOVING THE PIP MODULE PWB
Fig. 2
MEMORY PWB
FRONT CONTROL KNOB
MAIN PWB
CLAW
B
CHASSIS BASE
CLAW
E
(×2)
A
(×11)
REMOVING THE TERMINAL BOARD & AV SELECTOR PWB
Fig. 1
REAR COVER

Fig. 3

REMOVING THE CRT.

* Replacement of the CRT should be performed by two or more persons.

● After removing the rear cover, chassis and SP grill ass'y etc..,

1. Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth. (shown in Fig. 4)
2. While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig. 5.
3. Remove four screws marked by arrows with a box type screw driver as shown in Fig. 5.

● Since the cabinet will drop when screws have been removed, be sure to support the cabinet with hands.

4. After four screws have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.6.

● The CRT should be assembled according to the opposite sequence of its dismounting steps.

* The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

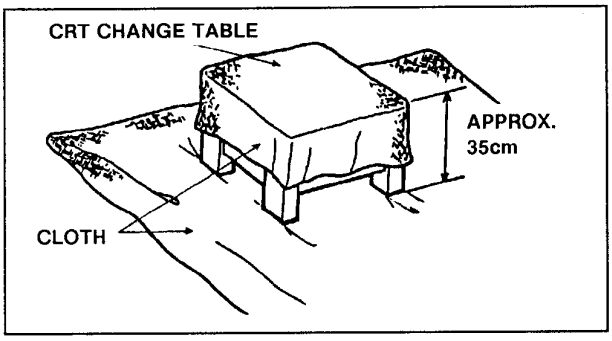


Fig. 4

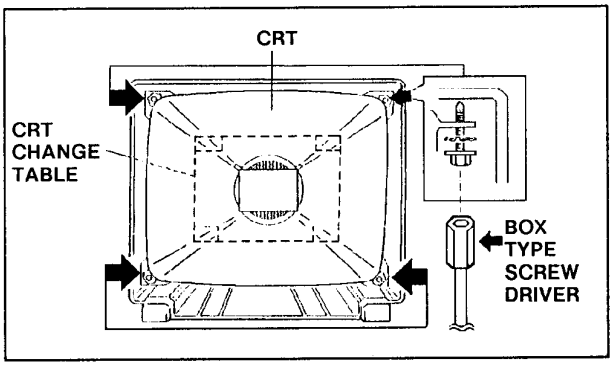


Fig. 5

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION

● Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismounting them, be sure to coat silicon grease for electrical insulation as shown in Fig. 7.
Wipe around the anode button with clean and dry cloth. (Fig. 7)
Coat silicon grease on the section around the anode button . At this time, take care so that any silicon grease does not stick to the anode button. (Fig. 8)

★ **Silicon grease product No.: KS - 650N**

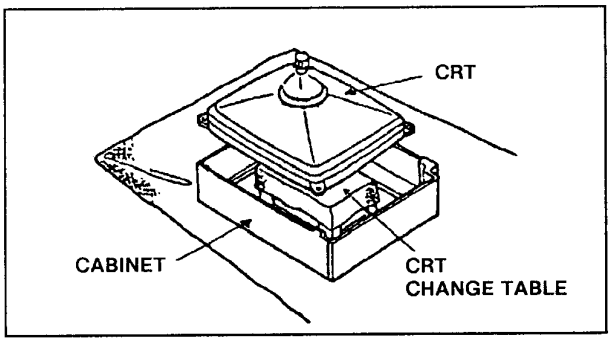


Fig. 6

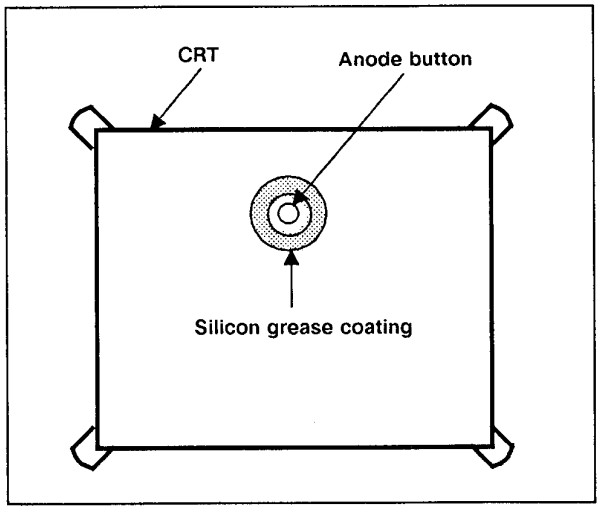


Fig. 7

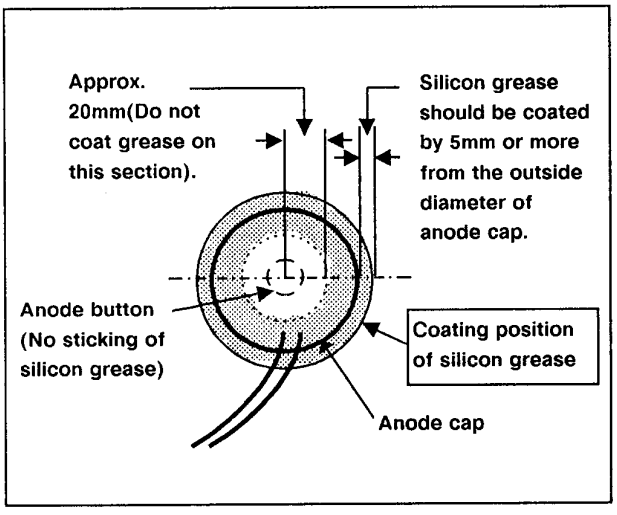


Fig. 8

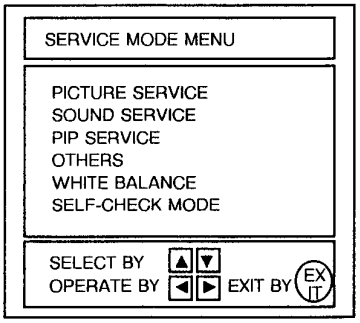
MEMORY IC REPLACEMENT

1. Memory IC

This product uses memory IC (EEP-ROM IC).
A memory IC stores data for properly operating Video and deflection circuits.
When replacing ICs, be sure to use ICs storing data (initial setting values).

2. Steps for replacing memory ICs

STEPS
(1) Turn off the power and pull out the power cord from the outlet.
(2) Replace memory ICs. (Be sure to use memory ICs with initial setting values stored.)
(3) Plug the power cord into the outlet and turn on the power.
(4) Setting receive channels: Set the receive channel (CHANNEL PRESET). Refer to the OPERATING INSTRUCTIONS for this setting.
(5) User setting. Check the user setting value of Table 1, and if setting value is different, set the correct value. Refer to the OPERATING INSTRUCTIONS for setting.
(6) Setting SERVICE MODE MENU Verify what to set in the SERVICE MODE MENU, and set whatever is necessary. (Fig. 1) Refer to the SERVICE ADJUSTMENT for setting.



(Fig. 1)

TABLE 1 (User Setting)

Setting Item	Setting Value	Setting Item	Setting Value
1. Use remote controller keys			
POWER	OFF	DISPLAY	OFF
CHANNEL	02	THEATER / AV STATUS	RESET
VOLUME	Proper sound volume	SLEEP TIMER	0 MIN.
TV / VIDEO	TV	PIP SOURCE	TV
CLOSED CAPTION	OFF	PIP POSITION	Lower left
HYPER SURROUND	OFF	PIP SIZE	1/9 (large)
2. Settings from MENU			
TINT	CENTER	CHANNEL SUMMARY	Set optionally
COLOR	CENTER		Stations 02 — CBS
PICTURE	CENTER		04 — NBC
BRIGHT	CENTER		07 — ABC
DETAIL	CENTER	AUTO TUNER SET UP	OTHERS
		TUNER MODE	AIR
NOTCH	OFF	CLOSED CAPTION	CAPTION : CC1
NOISE MUTE	OFF		TEXT : T1
SET AV STATUS	CENTER (CHOICE)		BACKGROUND : BLACK
		AUTO DEMO	NON SETTING
BASS	CENTER		
TREBLE	CENTER		
BALANCE	CENTER		
MTS	STEREO		
SET CLOCK	NON SETTING		
ON / OFF TIMER	NO		
TIME GUARD	NON SETTING		
SET LOCK CODE	NON SETTING		
3. Others			
AUDIO OUT SW	FIX		

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION:

1. **You can make the necessary adjustments for this unit with either the Remote Control Unit or with the adjustment tools and parts as before.**
2. **Adjustment with the Remote Control Unit is made on the basis of the initial setting values; however, the new setting values which set the screen to its optimum condition may differ from the initial settings.**
3. Turn on the power for the set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
4. Make sure that AC power (120V AC) is turned on correctly.
5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. Never touch any adjustment parts which are not specified in the list for this adjustment - variable resistors, transformers, condensers, etc.
7. Presetting before adjustment.
   Unless otherwise specified in the adjustment instructions, preset the following functions with the Remote Control Unit:

(1) THEATER / AV STATUS	RESET	(3) HYPER SURROUND	OFF
(2) NOTCH	OFF	(4) BASS,TREBLE,BALANCE	CENTER

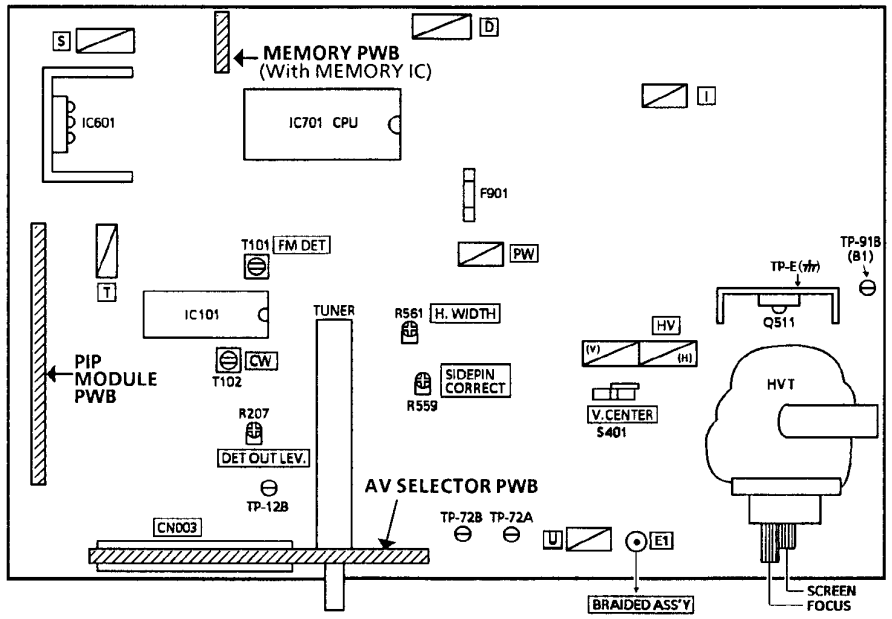
TESTERS & TOOLS

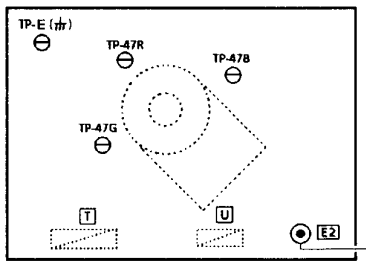
1. DC voltmeter (or digital voltmeter)
2. Oscilloscope
3. Signal generator (Pattern generator) [NTSC]
4. TV audio multiplex signal generator
5. Frequency counter
6. Remote control unit

ADJUSTMENT ITEMS

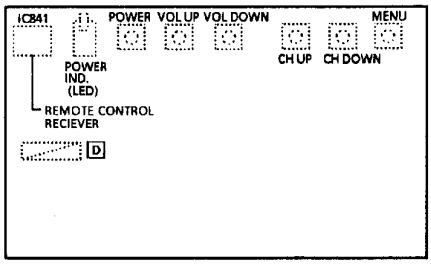
Adjustment items	Adjustment items
Verify B1 voltage	Adjust DEFLECTION circuit
Adjust VIDEO DETECTOR LEVEL	Adjust VIDEO/CHROMA circuit
Adjust RF AGC	Adjust PIP circuit
Adjust FOCUS	Adjust MTS circuit

ADJUSTMENT LOCATIONS





TOP
CRT SOCKET PWB
(SOLDER SIDE)



TOP
FRONT CONTROL PWB
(SOLDER SIDE)

BASIC OPERATION OF SERVICE MODE MENU

1. The SERVICE MODE MENU is operated with the Remote Control Unit.

2. Broadly classified, the SERVICE MODE MENU sets (adjusts) the following 5 items and verifies the operation of the SELF-CHECK MODE.

(1) PICTURE SERVICE . .	Sets the setting values (adjustment values) of the VIDEO / CHROME circuit and the DEFLECTION circuit.
(2) SOUND SERVICE	Sets the setting values (adjustment values) of the MULTI SOUND circuit
(3) PIP SERVICE	Sets the setting values (adjustment values) of the PICTURE-IN-PICTURE circuit.
(4) OTHERS	Sets the setting values (adjustment values) of the OTHERS circuit.
(5) WHITE BALANCE	Sets the setting values (adjustment values) of WHITE BALANCE.

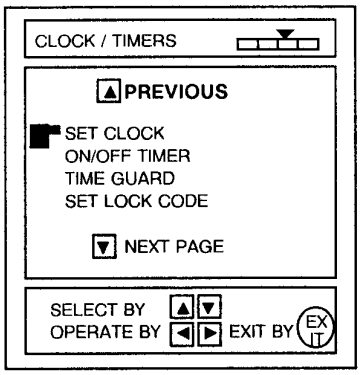
3. Basic operation of SERVICE MODE MENU

(1) Entering SERVICE MODE MENU

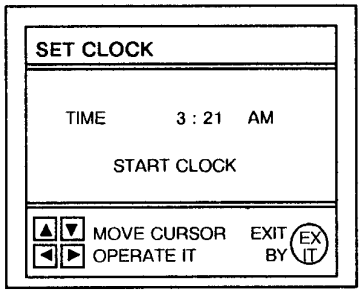
1] Press the UP/DOWN key of the REMOTE CONTROL UNIT menu, and select SET CLOCK. (Fig. 1)
Then press the LEFT / RIGHT key of the menu, and get the SET CLOCK screen of Fig. 2.

2] Using the LEFT/RIGHT and UP/DOWN keys, set the time at 3:21 AM. (Fig. 2)
With the UP/DOWN key, select START CLOCK and start it with the LEFT/RIGHT key. (Fig. 3)

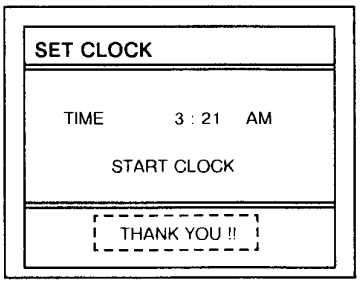
3] As soon as the clock starts, it will say "THANK YOU!!". (Fig. 4)



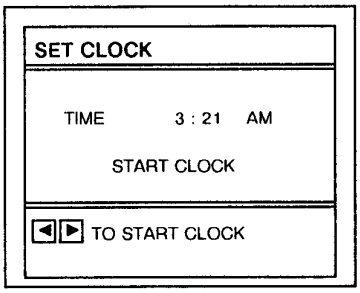
(Fig. 1)



(Fig. 2)



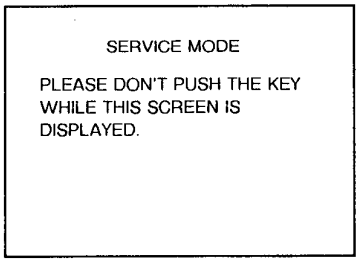
(Fig. 4)



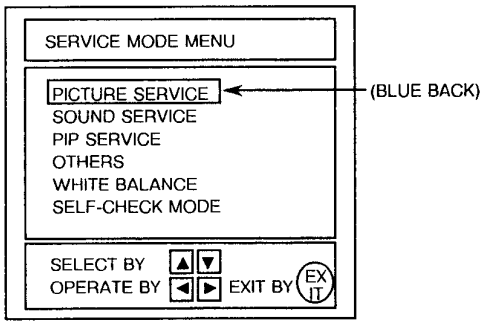
(Fig. 3)

4] While the "THANK YOU!!" display is on, press the MUTE key and the UP/DOWN key immediately thereafter, and get the SERVICE MODE screen of Fig. 5.

5] While the screen of Fig. 5 is on, press the UP/DOWN key and the SERVICE MODE MENU will come back. (Fig. 6)



(Fig. 5)



(Fig. 6)

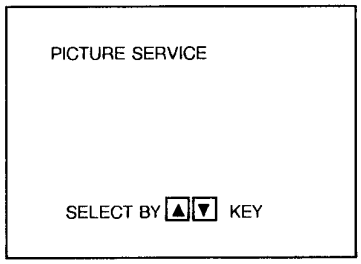
(2) Selecting SERVICE MODE MENU screen

1] Press the UP/DOWN key and select one of the following items. (Fig. 6)

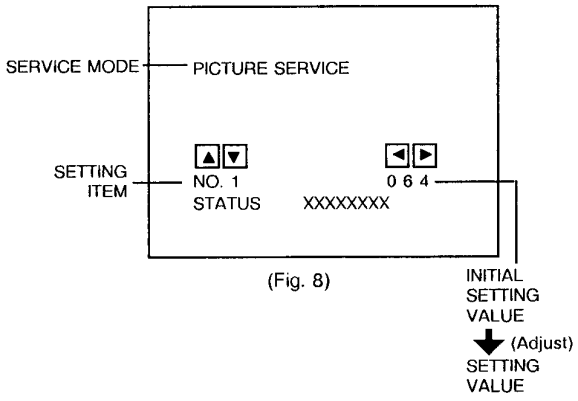
- PICTURE SERVICE
- SOUND SERVICE
- PIP SERVICE
- OTHERS
- WHITE BALANCE
- SELF-CHECK MODE

2] Temporarily select the PICTURE SERVICE, press the LEFT/RIGHT key and get the screen of Fig. 7.

3] Press the UP/DOWN key again, and you will get the PICTURE SERVICE screen for PICTURE SERVICE adjustment. (Fig. 8)



(Fig. 7)



(Fig. 8)

(3) Setting method

1] UP/DOWN key of the menu :
Selects the SETTING ITEM.

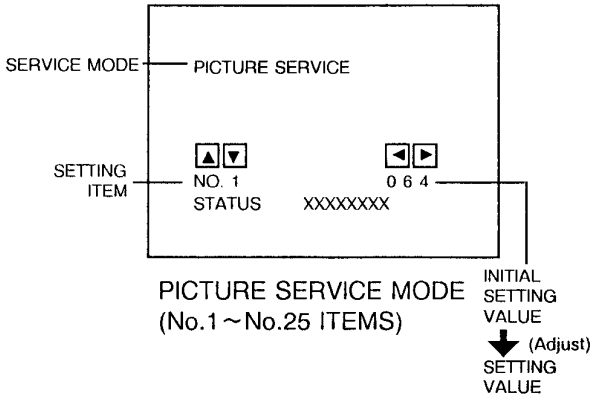
2] LEFT/RIGHT key of the menu :
Selects (adjusts) the SETTING VALUE of the SETTING ITEM.
When the key is left, the SETTING VALUE will be stored (memorized).

3] EXIT key : Returns to the previous screen.

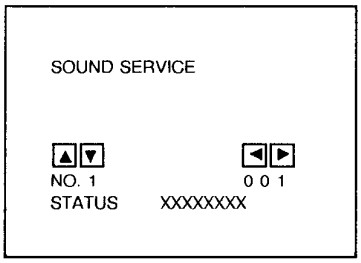
- For setting the WHITE BALANCE, refer to the page on ADJUSTMENT.
- For details of the SELF-CHECK MODE, refer to the page on the SELF-CHECK MODE.

(4) Releasing SERVICE MODE MENU

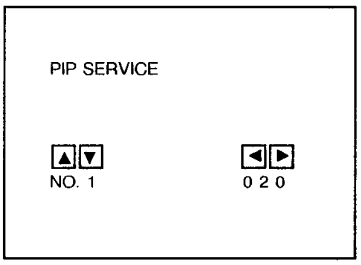
1] After returning to the SERVICE MODE MENU upon completion of the setting (adjustment) work, press the EXIT key again.



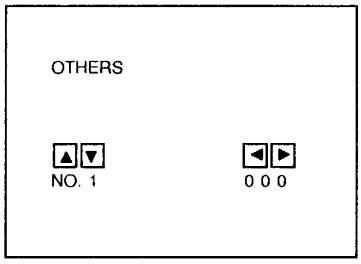
PICTURE SERVICE MODE
(No.1~No.25 ITEMS)



SOUND SERVICE MODE
(No.1~No.11 ITEMS)



PIP SERVICE MODE
(No.1~No.21 ITEMS)



OTHERS MODE
(No.1~No.31 ITEMS)

INITIAL SETTING VALUE OF SERVICE MODE MENU

1. Adjustment of the SERVICE MODE MENU is made on the basis of the initial setting values; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.

2. Do not change the Initial Setting Values of the Setting (Adjustment) items not listed in "ADJUSTMENT."

- PICTURE SERVICE MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value
1.	COLOR	1. COLOR	0~127	65
2.	TINT	2. TINT	0~127	68
3.	BRIGHT	3. BRIGHT	0~127	50
4.	PICTURE	4. PICT.	0~127	65
5.	DETAIL	5. DETAIL	0~63	32
6.	R CUTOFF	6. R CUT.	0~255	20
7.	G CUTOFF	7. G CUT.	0~255	20
8.	B CUTOFF	8. B CUT.	0~255	20
9.	G DRIVE	9. G DRV.	0~255	100
10.	B DRIVE	10. B DRV.	0~255	92
11.	V. PHASE	11. V PH.	0~7	0
12.	H. PHASE	12. H PH	0~31	16
13.	AFC	13. AFC	0~1	0
14.	WPL	14. WPL	0~1	0
15.	V. SIZE	15. V SIZE	0~63	32
16.	PIF VCO	16. PIF VC	0~127	63
17.	ATTENUATOR	17. ATTEN.	0~63	0
18.	BALANCE	18. BALANC	0~63	0
19.	RF AGC	19. RF AGC	0~63	48
20.	B. P. FILTER TV	20. BPF TV	0~1	1
21.	B. P. FILTER VIDEO	21. BPF V	0~1	0
22.	BLANKING	22. BLANK.	0~1	0
23.	A. SW	23. A. SW	0~1	0
24.	V. SW	24. V. SW	0~1	0
25.	D0/D1	25. D0/D1	0~3	0

- SOUND SERVICE MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value
1.	NOISE	1. NOISE	0~1	1
2.	INPUT LEVEL	2. IN LEV.	0~63	32
3.	FH MONITOR	3. FH MON	0~1	0
4.	STEREO VCO	4. ST. VCO	0~63	16
5.	PILOT CANCELER	5. PILOT	0~1	0
6.	FILTER	6. FILTER	0~63	24
7.	LOW SEPARATION	7. L. SEP.	0~63	36
8.	HI. SEPARATION	8. H. SEP.	0~63	23
9.	5FH MONITOR	9. 5FH MON	0~1	0
10.	SAP VCO	10. SAP VC	0~63	21
11.	INPUT GAIN	11. GAIN	0~1	0

- PIP SERVICE MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value
1.	ASPECT 1/9	1. ASP. 9	0~31	20
2.	V. POSI TOP 1/9	2. V TOP 9	0~255	18
3.	V. POSI BOTTOM 1/9 OFFSET	3. V OF 9	0~255	60
4.	H. POSI LEFT 1/9	4. H LEF 9	0~255	41
5.	H. POSI RIGHT 1/9 OFFSET	5. H OF 9	0~255	84
6.	ASPECT 1/16	6. ASP. 16	0~31	26
7.	V. POSI TOP 1/16	7. V TOP 16	0~255	18
8.	V. POSI BOTTOM 1/16 OFFSET	8. V OF 16	0~255	69
9.	H. POSI LEFT 1/16	9. H LEF 16	0~255	54
10.	H. POSI RIGHT 1/16 OFFSET	10. H OF 16	0~255	122
11.	Y/C DELAY	11. YC DL.	0~3	1
12.	FRAME WIDTH	12. FRAME	0~3	2
13.	CLAMP POS	13. CLAMP	0~3	1
14.	H AREA	14. H AREA	0~3	0
15.	V AREA	15. V AREA	0~3	2
16.	TINT	16. TINT	0~255	180
17.	COLOR	17. COLOR	0~255	200
18.	CONT	18. CONT	0~255	110
19.	SHARP	19. SHARP	0~255	170
20.	G DRIVE	20. G DRV.	0~255	175
21.	B DRIVE	21. B DRV.	0~255	170

- OTHERS MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value
1.	TIME DEBUG	1. TM DBG	0~1	0
2.	OSD	2. OSD	0~10	0
3.	TEXT	3. TEXT	7~31	22
4.	SEARCH	4. SEARCH	0~5	0
5.	MODE	5. MODE	0~1	0
6.	60Hz	6. 60Hz	0~1	0
7.	THEATER G DRIVE OFFSET	7. T G DR	-127~ +127	-46
8.	THEATER B DRIVE OFFSET	8. T B DR	-127~ +127	-78
9.	THEATER R CUTOFF OFFSET	9. T R CO	-127~ +127	0
10.	THEATER G CUTOFF OFFSET	10. T G CO	-127~ +127	-4
11.	THEATER B CUTOFF OFFSET	11. T B CO	-127~ +127	-14
12.	THEATER PICTURE OFFSET	12. T PICT	-127~ +127	-30
13.	THEATER TINT OFFSET	13. T TINT	-127~ +127	-4
14.	THEATER COLOR OFFSET	14. T COL	-127~ +127	-7
15.	THEATER BRIGHT OFFSET	15. T BRT.	-127~ +127	+3
16.	THEATER DETAIL OFFSET	16. T DET.	-127~ +127	0
17.	THEATER BASS OFFSET	17. T BASS	-127~ +127	0
18.	THEATER TREBLE OFFSET	18. T TRBL	-127~ +127	0
19.	BRIGHT ROOM G DRIVE OFFSET	19. B G DR	-127~ +127	0
20.	BRIGHT ROOM B DRIVE OFFSET	20. B B DR	-127~ +127	0
21.	BRIGHT ROOM R CUTOFF OFFSET	21. B R CO	-127~ +127	0
22.	BRIGHT ROOM G CUTOFF OFFSET	22. B G CO	-127~ +127	0
23.	BRIGHT ROOM B CUTOFF OFFSET	23. B B CO	-127~ +127	0
24.	BRIGHT ROOM PICTURE OFFSET	24. B PICT	-127~ +127	0
25.	BRIGHT ROOM TINT OFFSET	25. B TINT	-127~ +127	0
26.	BRIGHT ROOM COLOR OFFSET	26. B COL.	-127~ +127	0
27.	BRIGHT ROOM BRIGHT OFFSET	27. B BRT.	-127~ +127	0
28.	BRIGHT ROOM DETAIL OFFSET	28. B DET.	-127~ +127	0
29.	BRIGHT ROOM BASS OFFSET	29. B BASS	-127~ +127	0
30.	BRIGHT ROOM TREBLE OFFSET	30. B TRBL	-127~ +127	0
31.	PICTURE MUTE OFFSET	31. P MUTE	-127~ +127	-90

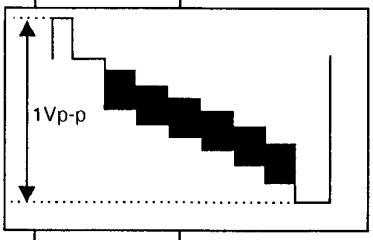
ADJUSTMENTS

VERIFICATION OF B1 VOLTAGE

Item	Measuring instrument	Test point	Adjustment part	Description
Verification of B1 voltage	Signal generator DC Voltmeter	TP-91B TP-E(⏚)		1. Receive a monoscope pattern signal. 2. Connect a DC voltmeter to TP-91B. 3. Verify that the voltage is DC134V ± 3V.

ADJUSTMENT OF VIDEO DETECTOR LEVEL

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of V. DET. LEVEL	Signal generator Oscilloscope [H-rate]	TP-12B	DET. LEVEL VR (R207)	1. Receive a full field color bar signal (including 100% white). 2. Connect an oscilloscope to TP-12B. 3. Adjust the DET. LEVEL VR. and make the wave detector output (synchronous tip ~ white peak) 1Vp-p.



ADJUSTMENT OF RF AGC

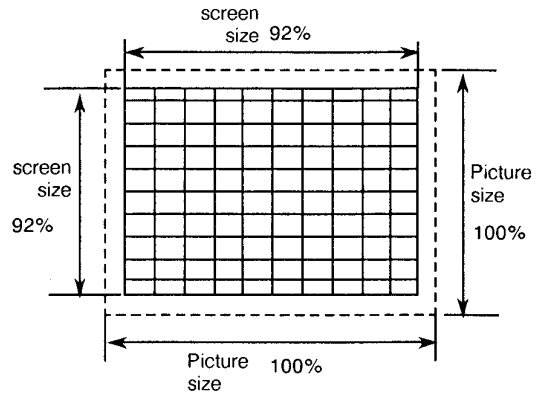
Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of RF. AGC	Remote control unit		No.19 RF AGC	1. Receive a broadcast. 2. Select "No.19 RF AGC" of the PICTURE SERVICE MODE. 3. Press the MUTE key and turn off color. 4. With the MENU LEFT key, get noise in the screen image. (0 side of setting value) 5. Press the MENU RIGHT key and stop when noise disappears from the screen. 6. Change to other channels and make sure that there is is no irregularity. 7. Press the MUTE key and get color out.

ADJUSTMENT OF FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of FOCUS	Signal generator		FOCUS VR [built-in HVT]	1. Receive a crosshatch signal. 2. While looking at the screen, adjust FOCUS VR so that the vertical and horizontal lines will be clear and in fine detail. 3. Make sure that the picture is in focus even when the screen gets darkened.

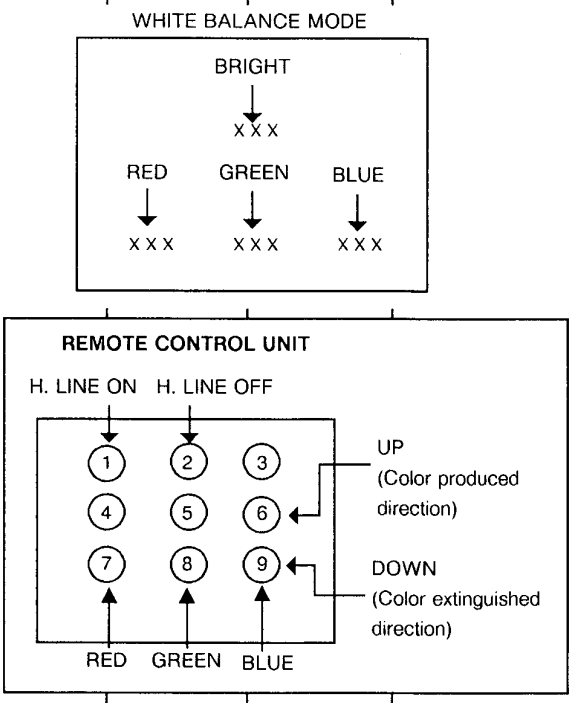
ADJUSTMENT OF DEFLECTION CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of V.PHASE, V.SIZE and V.POSITION	**Signal generator** **Remote control unit**		**No.11** **V. PHASE** **No.15** **V. SIZE** **V. CENTER SW (S1401)**	1. Receive a crosshatch signal. 2. Make sure that the "No.11 V.PHASE" of the PICTURE SERVICE MODE is 0. 3. Press the LEFT/RIGHT keys of the MENU to set the initial setting value for the No.15 V.SIZE. 4. Adjust the vertical SCREEN size to 92% with the No.15 V.SIZE and S1401 (V.CENTER SW).
Adjustment of H. WIDTH, SIDEPIN CORRECT and H.PHASE			**No.12** **H. PHASE** **SIDEPIN CORRECT. VR (R1559)** **H. WIDTH VR (R1561)**	1. Receive a crosshatch signal. 2. Adjust the SIDEPIN CORRECT. VR(R1559) so that vertical lines at both side of the crosshatch are straight. 3. Select the "No.12 H.PHASE" of the PICTURE SERVICE MODE. 4. Press the LEFT/RIGHT keys of the MENU to set the initial setting value for the "No.12 H. PHASE". 5. Adjust the "No.12 H.PHASE" until the screen will be horizontally centered. 6. Adjust the H. WIDTH VR (R1561) so that 92% of the overall crosshatch is displayed on the screen. 7. As required, repeat above steps 2 and 6.



ADJUSTMENT OF VIDEO / CHROMA CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of WHITE BALANCE (LOW LIGHT)	**Signal generator** **Remote control unit**		**No.6** **R CUT OFF** **No.7** **G CUT OFF** **No.8** **B CUT OFF** **SCREEN VR**	1. Receive a black-and-white signal (Color off). 2. Select the "No.6 R CUT OFF, No.7 G CUT OFF, No.8 B CUT OFF" of the PICTURE SERVICE MODE, and set the corresponding initial setting values. 3. Set the "No.3 BRIGHT" at the initial setting value. 4. Press the EXIT key, return to the SERVICE MODE MENU and select the WHITE BALANCE MODE. 5. Press the 1 key of the Remote Control Unit and display one horizontal line. 6. Turn the SCREEN VR fully to the left. 7. Start turning the SCREEN VR from the left end to right, and make red, blue and green colors faintly glitter. 8. Press KEY 2 and cancel one horizontal line. Use KEYS 4 to 9 of the remote control unit to adjust two colors other than the first color so the low light becomes white. (Increase the BRIGHT level when the screen is dark and is difficult to see at this time.) 9. Check the PIP brightness according to the PIP model and adjust it by the screen VR when it is not optimum.
Adjustment of WHITE BALANCE (HIGH LIGHT)	**Signal generator** **Remote control unit**		**No.9** **G DRIVE** **No.10** **B DRIVE**	1. Receive a black-and-white signal (Color off). 2. Select the "No.9 G DRIVE, No.10 B DRIVE" of the PICTURE SERVICE MODE. 3. Set the corresponding initial setting values with the LEFT/RIGHT key of the menu. 4. Adjust the "No.9 G DRIVE, No.10 B DRIVE" so that the screen will become white.



Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of SUB BRIGHT	**Remote control unit**		**No.3 BRIGHT**	1. Receive a broadcast. 2. Select "No.3 BRIGHT" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.3 BRIGHT with the LEFT/RIGHT key of the menu. 4. If the brightness is not the best with the initial setting value, make fine adjustment of the "No.3 BRIGHT until you get the optimum brightness.
Adjustment of SUB CONTRAST	**Remote control unit**		**No.4 PICTURE**	1. Receive a broadcast. 2. Select "No.4 PICTURE" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.4 PICTURE with the LEFT/RIGHT key of the menu. 4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.4 PICTURE" until you get the optimum contrast.
Adjustment of SUB COLOR	**Remote control unit**		**No.1 COLOR**	1. Receive a broadcast. 2. Select "No.1 COLOR" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.1 COLOR with the LEFT/RIGHT key of the menu. 4. If the color is not the best with the initial setting value, make fine adjustment of the "No.1 COLOR" until you get the optimum color.
Adjustment of SUB TINT	**Remote control unit**		**No.2 TINT**	1. Receive a broadcast. 2. Select "No.2 TINT" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.2 TINT with the LEFT/RIGHT key of the menu. 4. If the tint is not the best with the initial setting value, make fine adjustment of the "No.2 TINT" until you get the optimum tint.

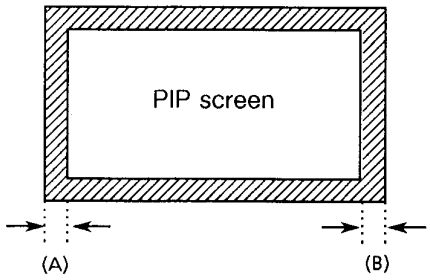
ADJUSTMENT OF PIP CIRCUIT

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>Adjustment of PIP WHITE BALANCE</td><td>Signal generator

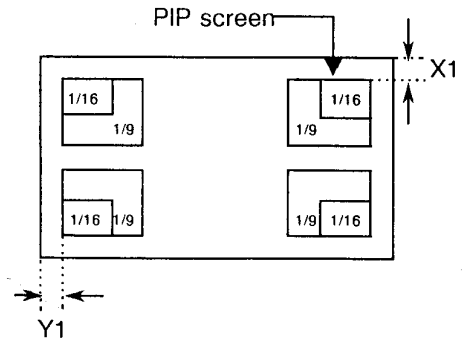
Remote control unit</td><td></td><td>No.20
G DRIVE

No.21
B DRIVE</td><td>1. Receive a black-and-white signal. (Color off)
2. Select the "No.20 G DRIVE, No.21 B DRIVE" of the PIP SERVICE MODE.
3. Set the corresponding initial setting values with the LEFT/RIGHT key of the menu.
4. Adjust the "No.20 G DRIVE, No.21 B DRIVE" until the screen becomes white.</td></tr>
<tr><td>Adjustment of PIP FRAME WIDTH</td><td>Signal generator

Remote control unit

  </td><td></td><td>No.12
FRAME WIDTH</td><td>1. Receive a black-and-white signal. (Color off)
2. Select the "No.12 FRAME WIDTH" of the PIP SERVICE MODE.
3. Adjust the "No.12 FRAME WIDTH" so that the width of the PIP screen frame will be left to right equal (A = B).</td></tr>
<tr><td>Adjustment of PIP DISPLAY POSITION</td><td>Signal generator

Remote control unit

  </td><td></td><td>No.2
V. POSI TOP 1/9

No.4
H. POSI LEFT 1/9

No.7
V. POSI TOP 1/16

No.9
H. POSI LEFT 1/16</td><td>1. Receive a black-and-white signal. (Color off)
2. Select the "No.2 V.POSI TOP 1/9" OF THE PIP SERVICE MODE.
3. Set the initial setting value of the No.2 V.POSI TOP 1/9" with the LEFT/RIGHT key of the menu.
4. Adjust the "No.2 V.POSI TOP 1/9" so that the position of the PIP screen at the top right will be at X1 as shown.
5. Adjust the corresponding modes of "No.4, No.7, No.9" with the same steps as 2~4 above.

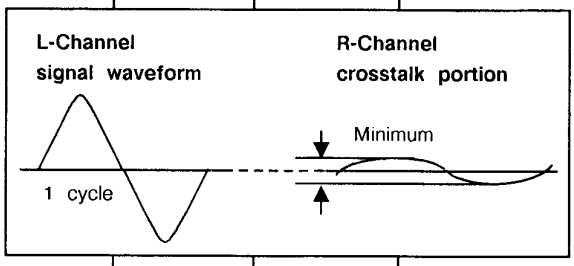
<table><tr><th rowspan="2">PIP SERVICE MODE NO.</th><th rowspan="2">PIP SCREEN SIZE</th><th colspan="2">PIP SETTING POSITION</th></tr><tr><th>Approx. (mm)</th><th>%</th></tr><tr><td>2</td><td>1/9 SIZE (X1)</td><td>30</td><td>80 ± 2%</td></tr><tr><td>4</td><td>1/9 SIZE (Y1)</td><td>40</td><td>80 ± 2%</td></tr><tr><td>7</td><td>1/16 SIZE (X1)</td><td>30</td><td>80 ± 2%</td></tr><tr><td>9</td><td>1/16 SIZE (Y1)</td><td>40</td><td>80 ± 2%</td></tr></table></td></tr>
</table>

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of PIP SUB CONTRAST	Remote control unit		No.18 CONT.	1. Receive a broadcast. 2. Select "No.18 CONT" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.18 CONT" with the LEFT/RIGHT key of the menu. 4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.18 CONT" until you get the optimum contrast.
Adjustment of PIP SUB COLOR	Remote control unit		No.17 COLOR	1. Receive a broadcast. 2. Select "No.17 COLOR" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.17 COLOR" with the LEFT/RIGHT key of the menu. 4. If the color is not the best with the initial setting value, make fine adjustment of the "No.17 COLOR" until you get the optimum color.
Adjustment of PIP SUB TINT	Remote control unit		No.16 TINT	1. Receive a broadcast. 2. Select "No.16 TINT" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.16 TINT" with the LEFT/RIGHT key of the menu. 4. If the tint is not the best with the initial setting value, make fine adjustment of the "No.16 TINT" until you get the optimum tint.

ADJUSTMENT OF MTS CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of MTS INPUT LEVEL	Remote control unit		No.2 INPUT LEVEL	1. Select the "No.2 INPUT LEVEL" of the SOUND SERVICE MODE. 2. Verify that the "No.2 INPUT LEVEL" is set at its initial setting value.
Adjustment of MTS STEREO VCO	Signal generator Frequency counter Remote control unit	AUDIO R OUTPUT	No.3 FH MONITOR No.4 STEREO VCO	1. Receive an RF signal - not containing an audio signal - from the antenna terminal. 2. Connect the Frequency Counter to the AUDIO R OUTPUT terminal. 3. Select the "No.3 FH MONITOR" of SOUND SERVICE MODE, and change the setting value from 0 to 1. 4. Select the "No.4 STEREO VCO." 5. Set the initial setting value of the "No.4 STEREO VCO" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.4 STEREO VCO" so that the Frequency Counter will display 15.73KHz ± 0.1KHz. 7. Select the "No.3 FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 1 to 0.
Verification of MTS FILTER	Remote control unit		No.6 FILTER	1. Select the "No.6 FILTER" of the SOUND SERVICE MODE. 2. Verify that the "No.6 FILTER" is set at its initial setting value.

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of MTS SEPARATION	TV audio multiplex signal generator Oscilloscope Remote control unit		No.7 LOW F SEPARATION No.8 HI. F SEPARATION	1. Input a stereo L signal (300Hz) from the TV Audio Multiplex Signal Generator to the antenna terminal. 2. Connect an oscilloscope to the AUDIO L OUTPUT terminal, and display one cycle portion of the 300Hz signal. 3. Change the connection of the oscilloscope to the AUDIO R OUTPUT terminal, and enlarge the voltage axis. 4. Select the "No.7 LOW F SEPARATION" of the SOUND SERVICE MODE. 5. Set the initial setting value of the "No.7 LOW F SEPARATION" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.7 LOW F SEPARATION" so that the stroke element of the 300Hz signal will become minimum. 7. Change the signal to 3kHz, and similarly adjust the "No.8 HI. F SEPARATION."
Adjustment of MTS SAP VCO	Signal generator Frequency counter Remote control unit	AUDIO R OUTPUT	No.9 5FH MONITOR No.10 SAP VCO	1. Receive an RF signal - not containing an audio signal - from the antenna terminal. 2. Connect the Frequency Counter to the AUDIO R OUTPUT terminal. 3. Select the "No.9 5FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 0 to 1. 4. Select the "No.10 SAP VCO." 5. Set the initial setting value of "No.10 SAP VCO" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.10 SAP VCO" so that the Frequency Counter will display 78.67KHz ± 0.5KHz. 7. Select the "No.9 5FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 1 to 0.



HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing of the high voltage hold down circuit shown in Fig. 1.
This circuit shall be checked to operate correctly.

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT.

(1) Make sure that the power SW is at OFF.
(2) As shown in Fig. 1, set the resistor (between TP-72A and TP-72B).
(3) Turn the power SW ON.
(4) Make sure that the screen picture disappears.
(5) Turn the power SW OFF.
(6) Remove the resistor between TP-72A and TP-72B.

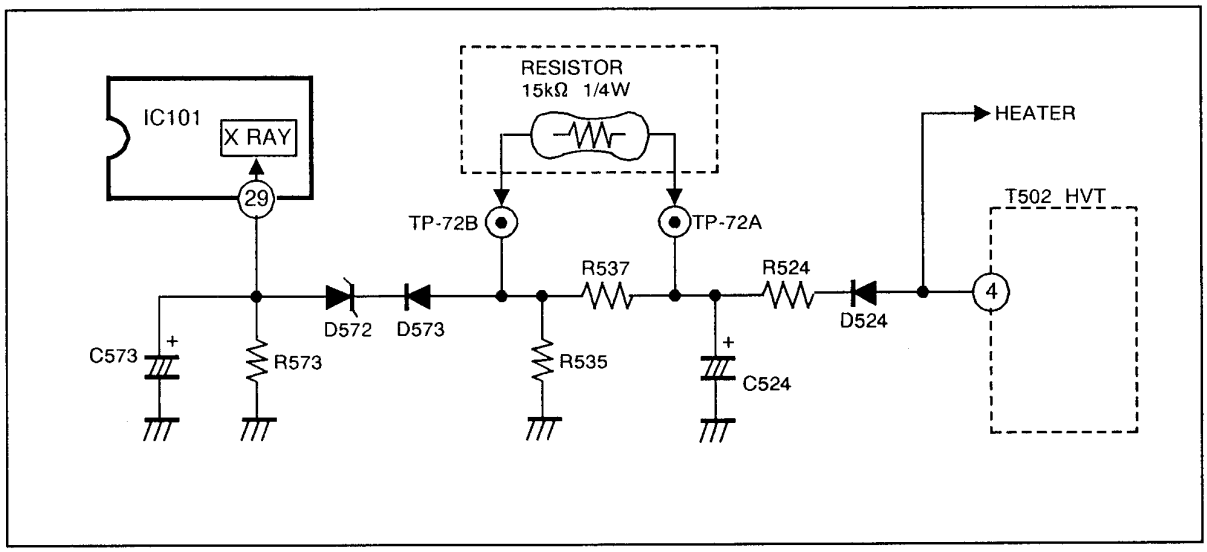


Fig. 1

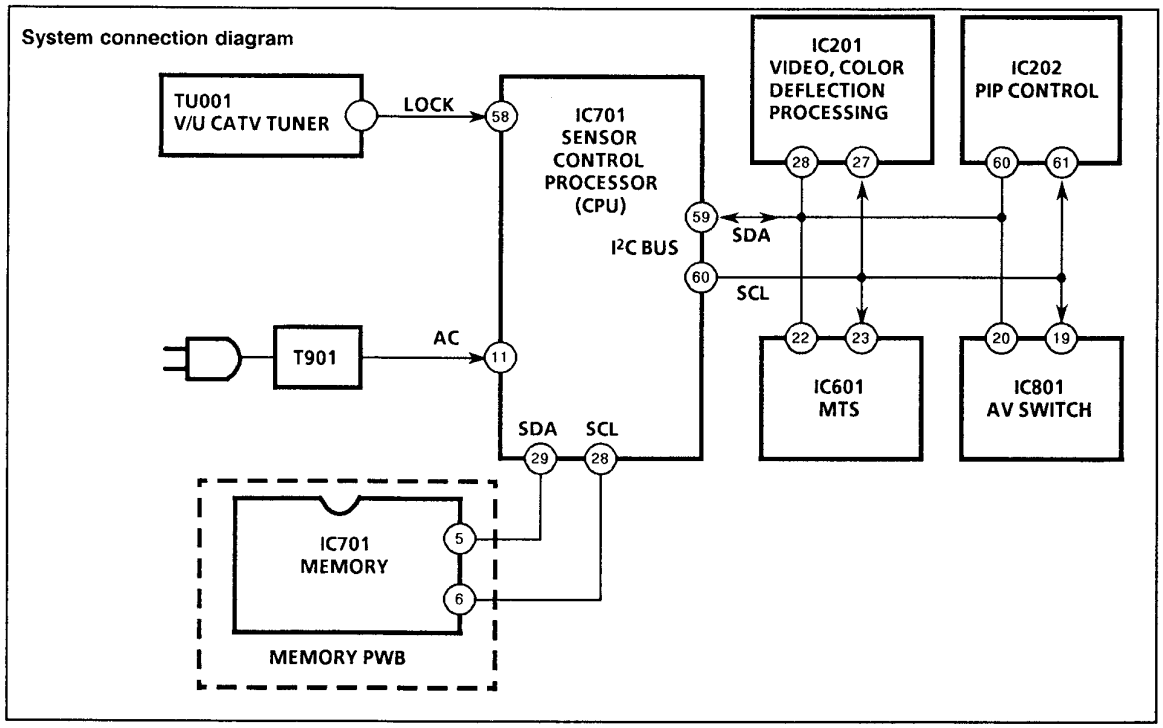
SELF-CHECK MODE

1. Summary

This model is loaded with a SELF-CHECK MODE which checks the circuits operation, then displays and records any errors or irregularities when they occur.

Error detection is performed in the input data mode from the I²C BUS line and for each control line connected to the main CPU. When circuit errors or malfunctions occur, the SELF-CHECK MODE screen will display "NG."

The result of the circuit check will be recorded in the memory IC.



2. Using SELF-CHECK MODE

(1) Entering SELF-CHECK MODE

1] Enter SERVICE MODE MENU. (Refer to the basic operation of the SERVICE MODE MENU)

2] Select SELF-CHECK MODE of the SERVICE MODE MENU.

3] The SELF-CHECK MODE screen shown at right will be on display.

(2) Notes on the SELF-CHECK MODE screen

1] The screen will display "GOOD" when checked items are normal, and "NG" when there is an error.

2] The frequency of errors will be counted and shown after the letters "NG" up to number 9. If the frequency of errors counted is more than 9, this display will remain at 9.

* Only SYNC (existence or non-existence of synchronous signal) will not be counted.

3] The counted frequency will remain stored in the memory unless it is deleted (reset).

(3) Releasing SELF-CHECK MODE

1] When keeping counted frequency

Press the EXIT key of the Remote Control Unit twice, and return to the normal screen.

2] When deleting the display of counted frequency

Turn off the power while the SELF-CHECK MODE screen is on.

< SELF-CHECK MODE >

		BUS	
TUN	NG1	MEM	GOOD
B1	GOOD	VCD	NG1
XRAY	GOOD	TONE	
SYNC	GOOD	/MTS	NG3
TIM	GOOD	SW	GOOD
		PIP	GOOD

Item

GOOD : NORMAL

NG 3

Frequency of ERROR

ERROR

★ "B1" and "X RAY" is displayed on the screen, but dose not function.

(4) In addition to circuit errors (malfunctions), the following conditions will be regarded as malfunctions, and the message "NG" and the number of counted errors will be displayed:

1] Temporary transmission malfunctions between circuits due to mixture of pulse, etc.
2] If many items display "NG" due to the timing lag of the IC Voltage (VCC) connected to the I²C BUS line which occurs when the power is turned on and off, this may interfere with the self-checking.

If an abnormal condition may occur again, delete (reset) number of counted the errors, and re-start the SELF-CHECK MODE.

3. Operation of the SELF-CHECK MODE

The following items are self-checked:

• General Lines

ITEMS CHECKED	DISPLAY	OPERATIONS CHECKED	CHECK SIGNAL (LINE)	METHOD OF DETECTION
TUNER	TUN	Normal operation of tuner	LOCK	When a LOCK signal is not transmitted in 350ms from the tuner, this will be NG.
Timer	TIM	Change (switching) of source power frequency	AC	AC pulse is periodically counted, and when the power frequency is switched 50Hz→60Hz or 60Hz→50Hz, this will be NG.

• I²C BUS Line

ITEMS CHECKED	DISPLAY	OPERATIONS CHECKED	CHECK SIGNAL (LINE)	METHOD OF DETECTION
Existence or non-existence of synchronous signal	SYNC	Existence or non-existence of input of synchronous signal. [IC201]	SDA	When data do not return from IC201 when data is transmitted from CPU, this will be NG.
MEMORY	MEM	Normal operation of read / write of memory IC [IC741]	MEMORY SDA	Read specific data written in memory IC, and if they are wrong data, this will be NG.
VIDEO, COLOR, DEF., PROCESSING	VCD	Normal operation of IC [IC201]	SDA	When data do not return from IC201 when data is transmitted from CPU, this will be NG.
MTS	TONE /MTS	Normal operation of IC [IC601]	SDA	When data do not return from IC601 when data is transmitted from CPU, this will be NG.
AV SWITCH	SW	Normal operation of IC [IC801]	SDA	When data do not return from IC801 when data is transmitted from CPU, this will be NG.
PIP CONTROL	PIP	Normal operation of IC [IC202]	SDA	When data do not return from IC202 when data is transmitted from CPU, this will be NG.

AV-35BP6(US&CA) STANDARD CIRCUIT DIAGRAM

■NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal :Color bar signal
(2)Setting positions of each knob/button and variable resistor :Original setting position when shipped
(3)Internal resistance of tester :DC 20kΩ/V
(4)Oscilloscope sweeping time :H ⇒20μS/div
:V ⇒5mS/div
:Others ⇒ Sweeping time is specified
(5)Voltage values :All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL[EXAMPLE]

●In the PW board :R1209→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

●Resistance value
No unit :[Ω]
K :[KΩ]
M :[MΩ]

●Rated allowable power
No indication :1/6[W]
Others :As specified

●Type
No indication :Carbon resistor
OMR :Oxide metal film resistor
MFR :Metal film resistor
MPR :Metal plate resistor
UNFR :Uninflammable resistor
FR :Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

●Capacitance value
1or higher :[pF]
less than 1 :[μF]

●Withstand voltage
No indication :DC50[V]
Others :DC withstand voltage[V]
AC indicated :AC withstand voltage[V]

* Electrolytic Capacitors
47/50[Example]:Capacitance value[μF]/withstand voltage[V]

●Type
No indication :Ceramic capacitor
MY :Mylar capacitor
MM :Metalized mylar capacitor
PP :Polypropylene capacitor
MPP :Metalized polypropylene capacitor
MF :Metalized film capacitor
TF :Thin film capacitor
BP :Bipolar electrolytic capacitor
TAN :Tantalum capacitor

(3)Coils

No unit :[μH]
Others :As specified

(4)Power Supply

:B1(134V)
:B2(12V)
:9V
:5V

* Respective voltage values are indicated.

(5)Test Point

: Test point
: Only test point display

(6)Connecting method

: Connector
: Wrapping or soldering
: Receptacle

(7)Ground symbol

: LIVE side ground
: ISOLATED(NEUTRAL) side ground
: EARTH ground
: DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

(1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

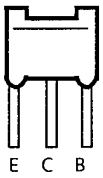
(2) Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

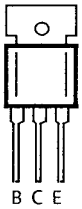
Jun. 1995 No.50953

SEMICONDUCTOR SHAPES (* = Bottom view)

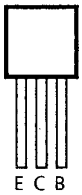
TRANSISTORS



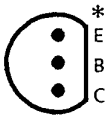
2SC4502-T
2SC5083(L-P)



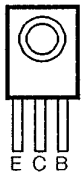
2SC2068-LB
2SC4256
2SD1133(CD)



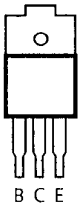
2SA933(QR) 2SC2785(JH)
2SA933S(QR) 2SC3311A(QR)
2SA1309A(QR) DTC114YS
2SC1740(QR) DTC124ES
2SC1740S(QR) DTC323TS



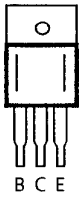
2SC3811(R)



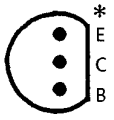
2SC4212



2SC4544-C1
2SD1555



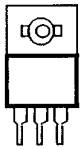
2SD2539-LB



2SA1015(YG) 2SC1360
2SA673(C) 2SC1959(Y)
2SA949(Y) 2SC2655(Y)
2SA966(OY) 2SC2482(C1)
2SB774(RS) 2SC2878(B)
2SC1815(YG)

ICs

AL78L09
AN78L05
AN78L12
RC78L05A-Y
TA78L005AP
TA78L012AP



AN7805F
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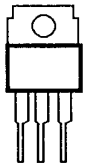
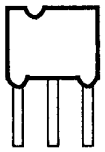
TA78012AP
UPC2412HF
UPC2405HF

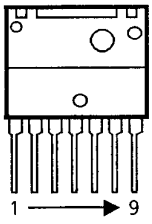


XRA17809T

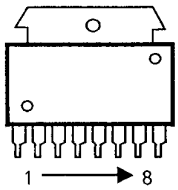


MN1280-K
MN1280-Q

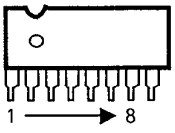
TFMS5380ESN



STR-S5708
STR-S6301



UPC1498H



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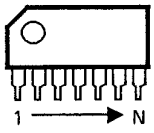

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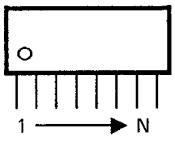

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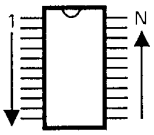

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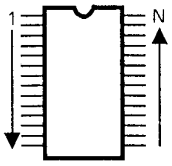
TC4066BP
TEA5114A
VUC2003
UPD6326C



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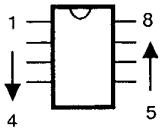
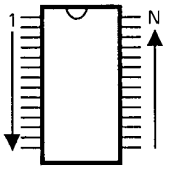
M65109BSP
M51365SP
TA1201AN
TA8662N
TA8720AN
TA8759AN

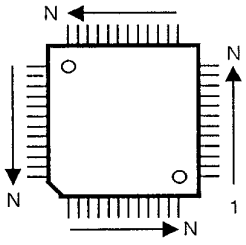


AT24C04-GK

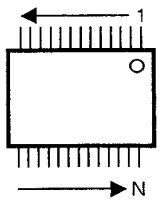


CXA1124BS
CXA1545AS
CXL5005P
FCB61C65-70P
LA4261
M37201M6-540SP
M50253P
M51496P
M52005P
PCF84C81P/064
SAA5231
SAA5243P/E
TDA1526
TDA3810
UPC1851CU

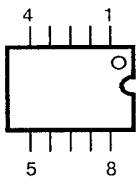
CHIP ICs



LC74401E



LC7480M-W
TA8779F-X



BA7655AF-X

■ CHANNEL CHART(US)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		I
			03		
			04		
			05		
			06		
		VH	07		II
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	I
			B	15	
			C	16	II
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	IV
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W + 35	71	IV
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
			W + 59	100	
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

CHANNEL CHART(CA)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		I
			03		
			04		
			05		
			06		
		VH	07		II
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	
			B	15	
			C	16	
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	III
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
			W + 29	65	
		ULTRA	W + 30	66	IV
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W + 35	71	IV
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
			W + 59	100	
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	II
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

WIRING LIST

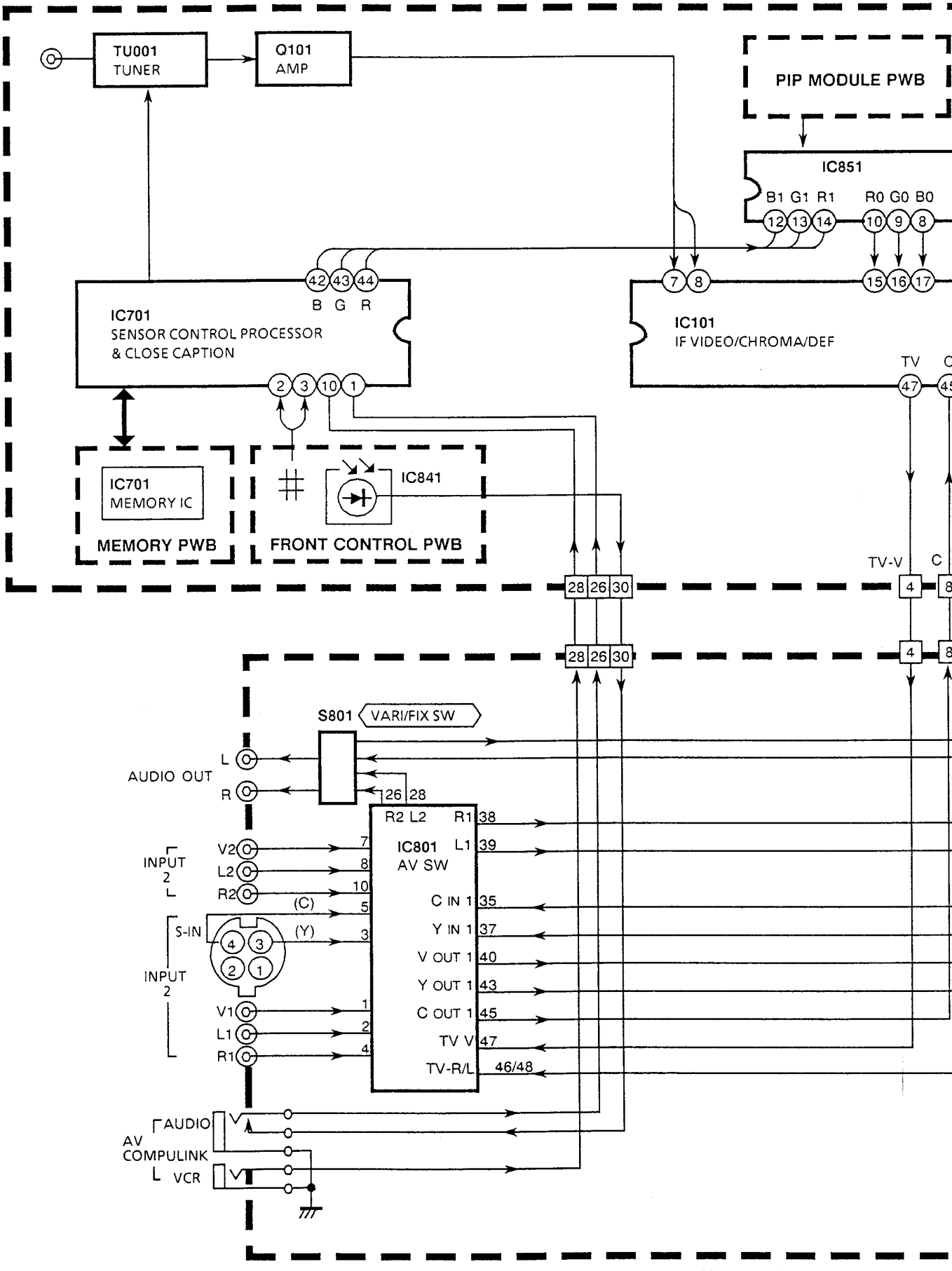
P.W.B. or PART NAME	CONNECTOR NAME	WIRE	CONNECTOR NAME	P.W.B. or PART NAME
MAIN PWB ASS'Y	D	◄——►	D	FRONT CONTROL PWB ASS'Y
MAIN PWB ASS'Y	T	◄——►	T	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	U	◄——►	U	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	H/V	◄——►	WIRE	DEF. YOKE
MAIN PWB ASS'Y	I	◄——►	WIRE	DEG. COIL
MAIN PWB ASS'Y	PW	◄——►	———	POWER CORD
MAIN PWB ASS'Y	S	◄——►	WIRE	SPEAKER (L/R)
MAIN PWB ASS'Y	CRT EARTH	◄——►	EARTH WIRE	CRT (BRAIDED ASS'Y)
CRT SOCKET PWB ASS'Y	CRT EARTH	◄——►	EARTH WIRE	CRT (BRAIDED ASS'Y)

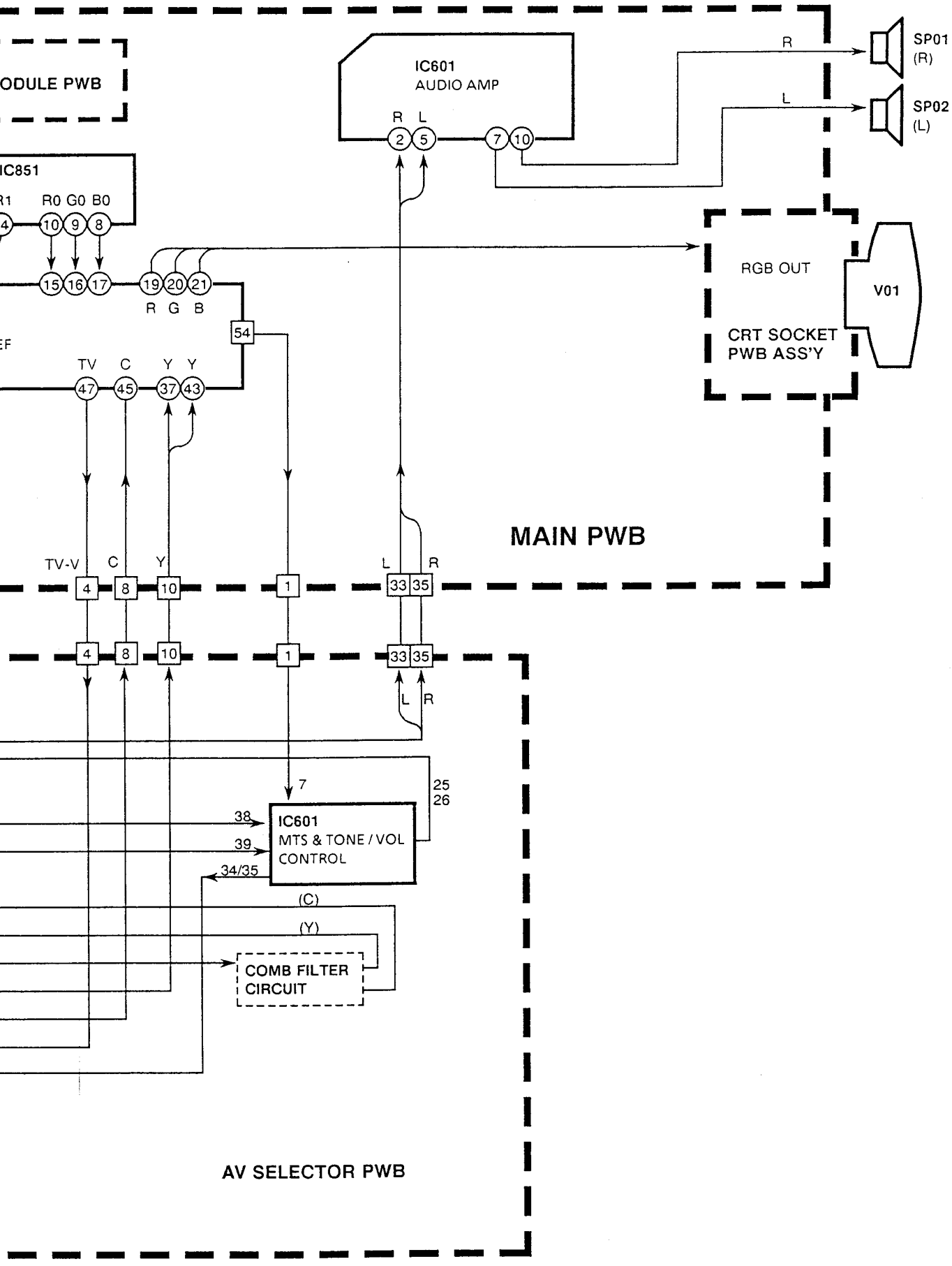
●NOTE :Refer to Main Parts and Alignment Locations (Page 2-5) for detailed connector positions.

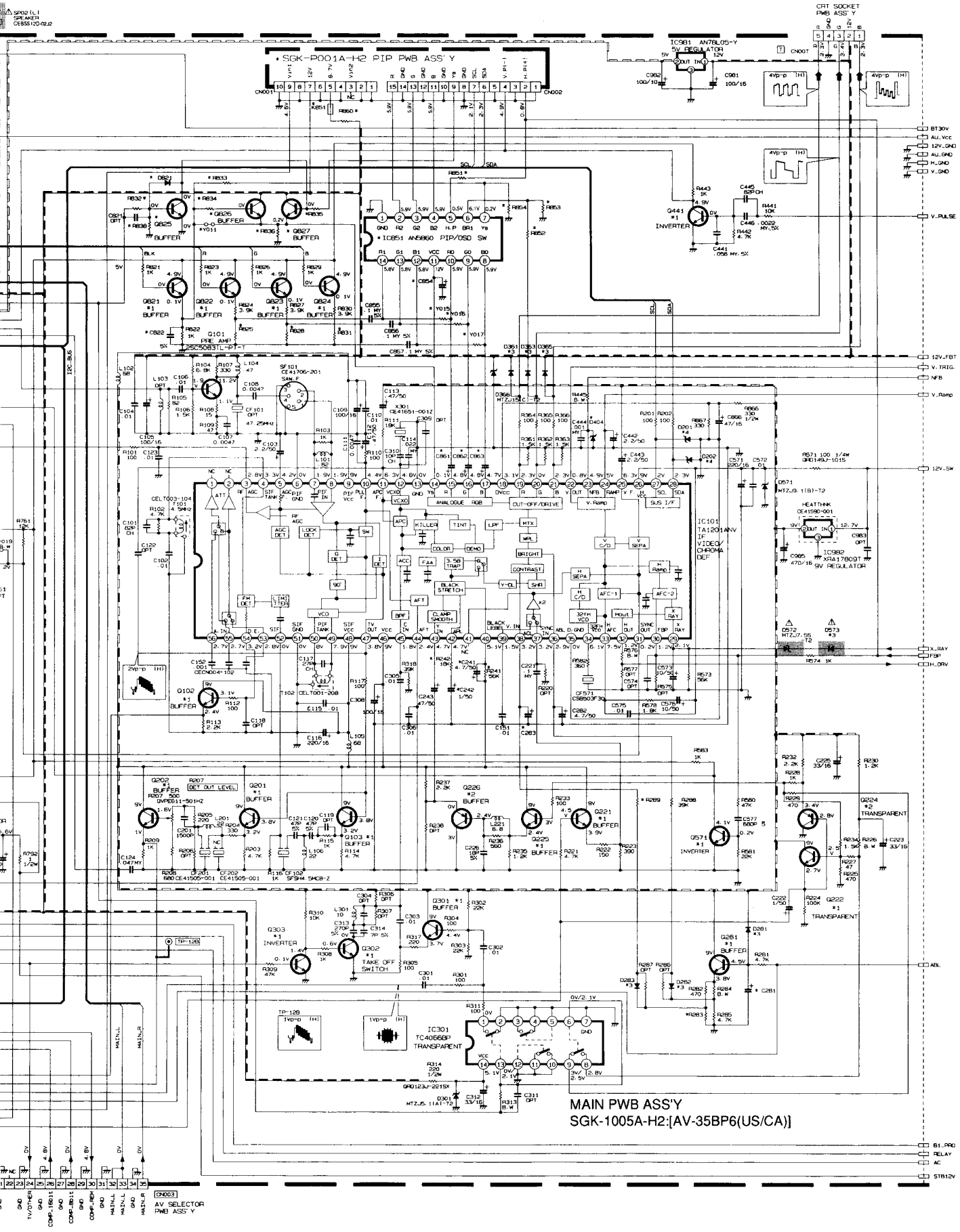
USING P.W. BOARD

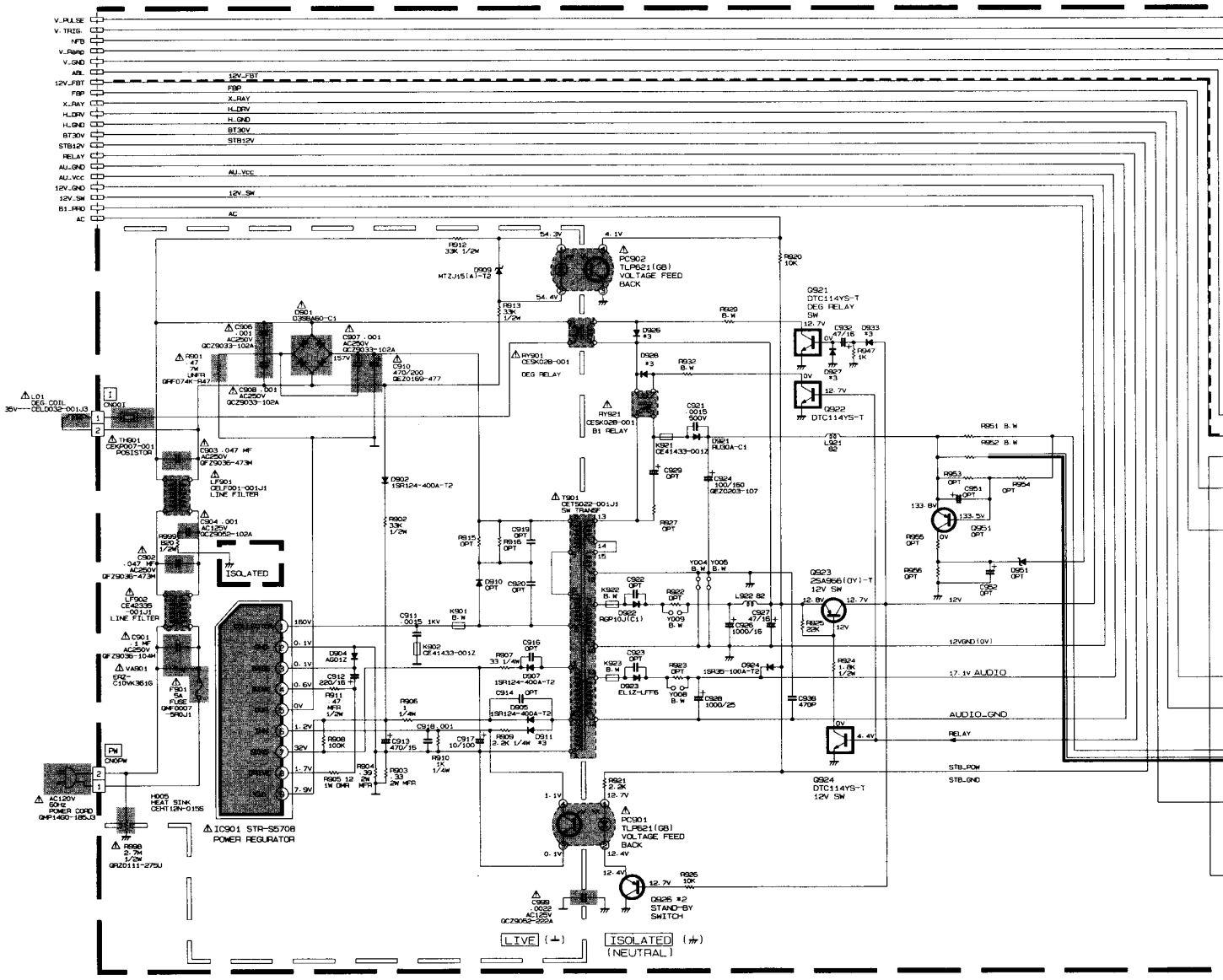
Model / P.W.B ASS'Y	AV-35BP6(US&CA)
MAIN P.W.B	SGK-1005A-H2
CRT SOCKET P.W.B	SGK-3003A-H2
FRONT CONTROL P.W.B	SGK-4001A-H2
AV SELECTOR P.W.B	SGK-8002A-H2
MEMORY P.W.B	SGK0M001A-H2
PIP MODULE P.W.B	SGK-P001A-H2

BLOCK DIAGRAM

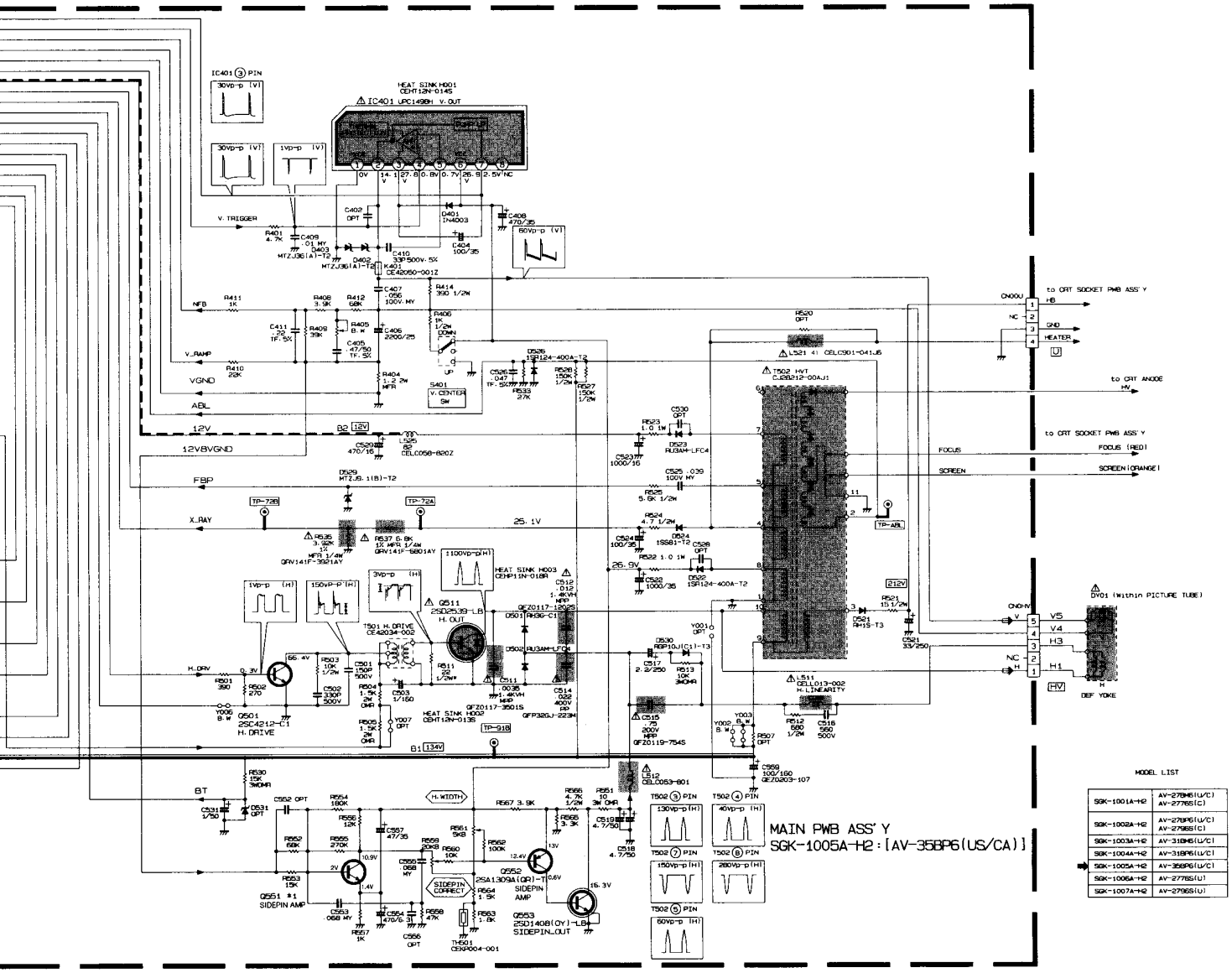



ODULE PWB
IC851
R1 R0 G0 B0
4 10 9 8
15 16 17 19 20 21
R G B
54
EF
TV C Y Y
47 45 37 43
IC601
AUDIO AMP
R L
2 5 7 10
R
L
SP01
(R)
SP02
(L)
RGB OUT
V01
CRT SOCKET
PWB ASS'Y
MAIN PWB
TV-V C Y
4 8 10 1
L R
33 35
4 8 10 1
33 35
L R
7
25
26
38
39
34/35
IC601
MTS & TONE / VOL
CONTROL
(C)
(Y)
COMB FILTER
CIRCUIT
AV SELECTOR PWB

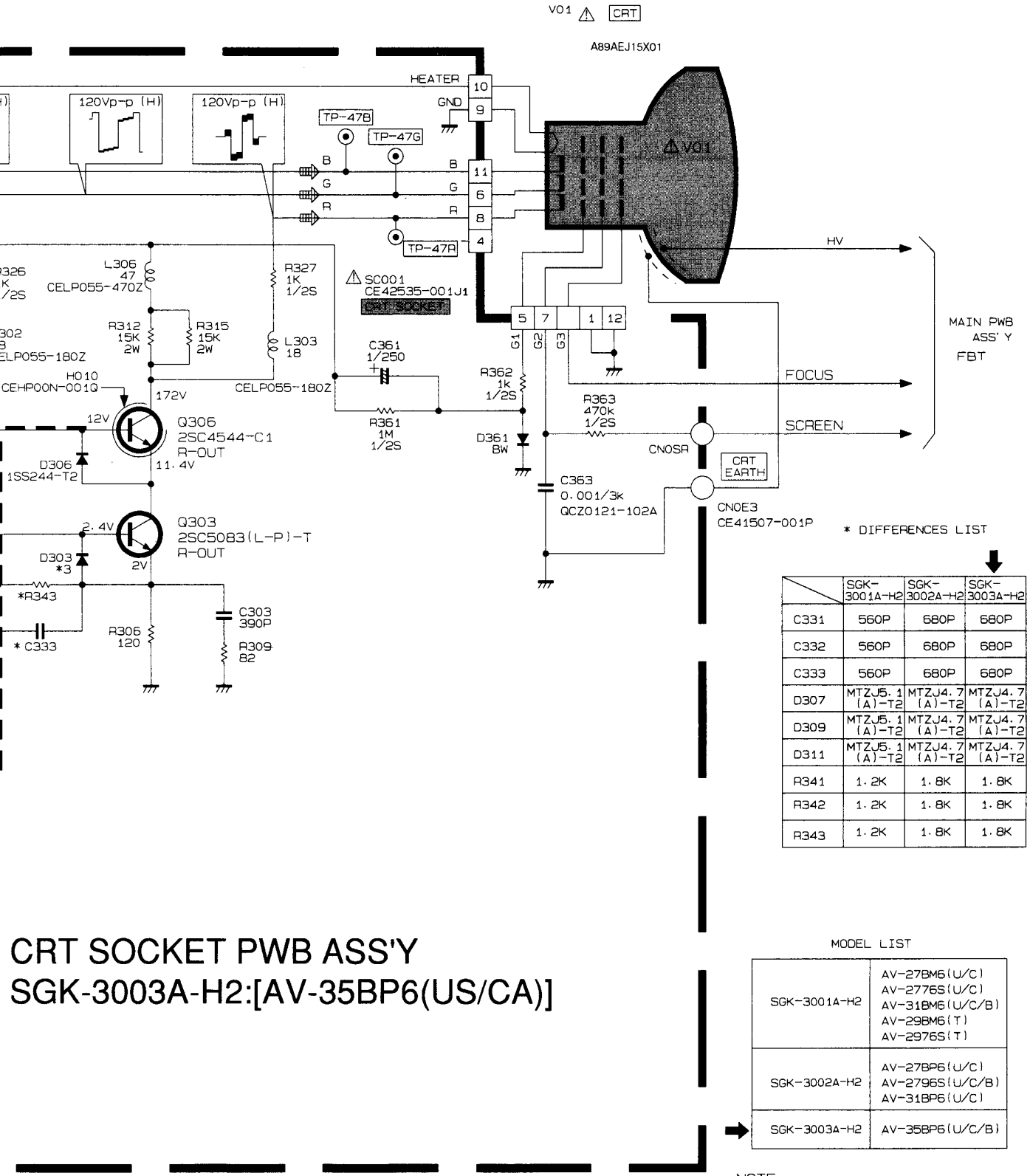

* SGK-P001A-H2 PIP PWB ASS'Y
CRT SOCKET PWB ASS'Y
IC101 TA1201ANV IF VIDEO/ CHROMA DEF
IC301 TC40660P TRANSPARENT
IC1851 AN5860 PIP/OSD SW
IC9B1 AN78L05-Y 5V REGULATOR
IC902 XR-A1780GT 9V REGULATOR
INVERTER
PRE AMP
BUFFER
TAKE OFF SWITCH
TRANSPARENT
AV SELECTOR PWB ASS'Y
MAIN PWB ASS'Y
SGK-1005A-H2:[AV-35BP6(US/CA)]


V_PULSE
V_TRIG
NFB
V_Ramp
V_GND
ABL
12V_FBT
FBP
X_RAY
H_DRV
H_GND
BT30V
STB12V
RELAY
AU_GND
AU_Vcc
12V_GND
12V_SW
B1_PRO
AC
PC902 TLP621(GB) VOLTAGE FEED BACK
PC901 TLP621(GB) VOLTAGE FEED BACK
RY901 OESK028-001 DEG RELAY
RY921 OESK028-001 B1 RELAY
T901 QETS022-001J1 SW TRANSF
IC901 STR-S5708 POWER REGURATOR
ISOLATED
LIVE
ISOLATED (NEUTRAL)
Q921 DTC114YS-T DEG RELAY SW
Q922 DTC114YS-T
Q923 2SA966(QY)-T 12V SW
Q924 DTC114YS-T 12V SW
Q926 *2 STAND-BY SWITCH
12VGND(0V)
17.1V AUDIO
AUDIO_GND
RELAY
STB_POW
STB_GND

Refer to the following PWB pattern. : MAIN PWB PATTERN page 2-21, 2-22, FRONT CONTROL PWB PATTERN page 2-24, MEMORY PWB PATTERN page 2-24.



Refer to the following PWB pattern. : CRT SOCKET PWB PATTERN page 2-23.



* DIFFERENCES LIST

	SGK-3001A-H2	SGK-3002A-H2	SGK-3003A-H2
C331	560P	680P	680P
C332	560P	680P	680P
C333	560P	680P	680P
D307	MTZJ5.1(A)-T2	MTZJ4.7(A)-T2	MTZJ4.7(A)-T2
D309	MTZJ5.1(A)-T2	MTZJ4.7(A)-T2	MTZJ4.7(A)-T2
D311	MTZJ5.1(A)-T2	MTZJ4.7(A)-T2	MTZJ4.7(A)-T2
R341	1.2K	1.8K	1.8K
R342	1.2K	1.8K	1.8K
R343	1.2K	1.8K	1.8K

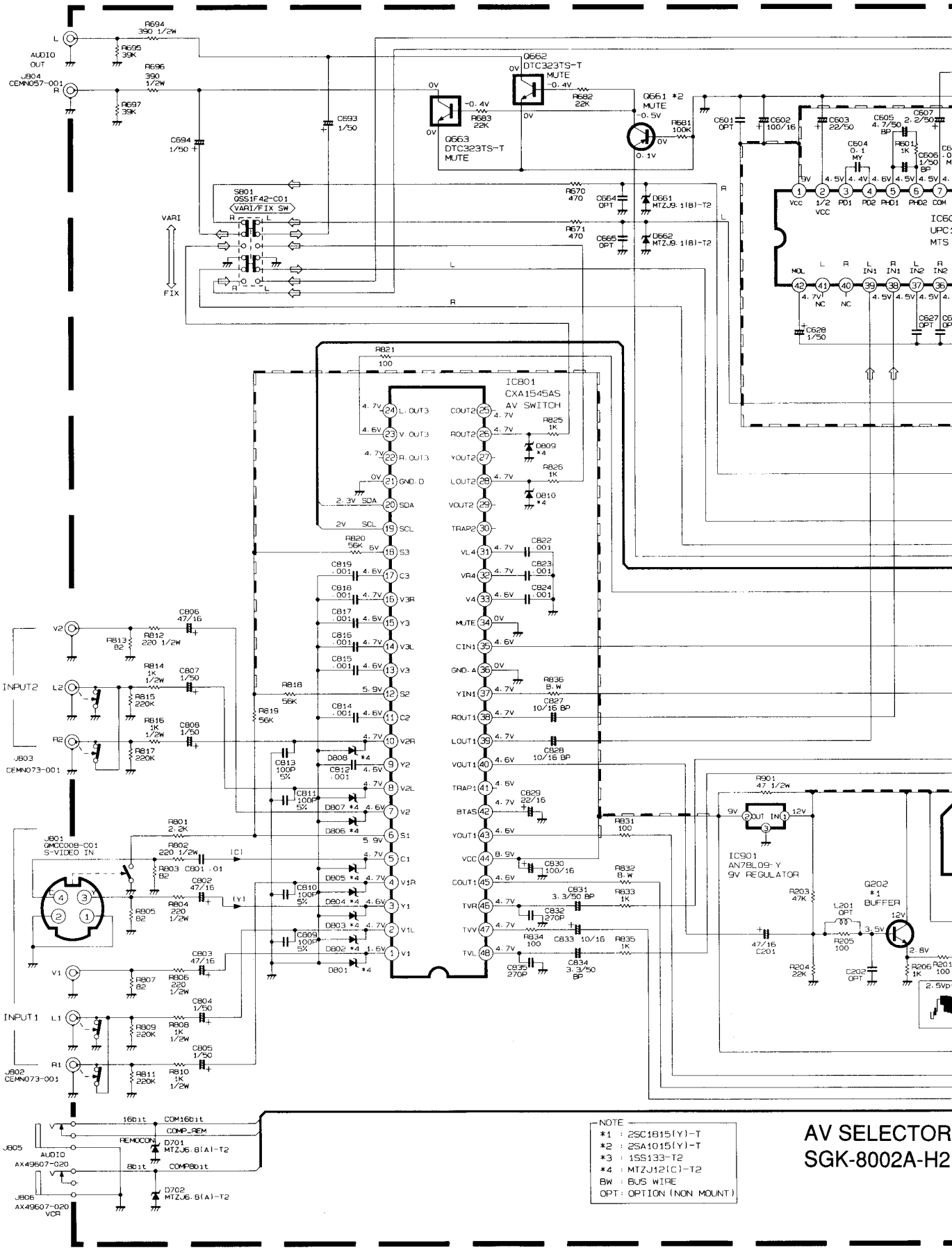
CRT SOCKET PWB ASS'Y
SGK-3003A-H2:[AV-35BP6(US/CA)]

MODEL LIST

SGK-3001A-H2	AV-27BM6(U/C) AV-2776S(U/C) AV-31BM6(U/C/B) AV-29BM6(T) AV-2976S(T)
SGK-3002A-H2	AV-27BP6(U/C) AV-2796S(U/C/B) AV-31BP6(U/C)
➡ SGK-3003A-H2	AV-35BP6(U/C/B)

NOTE
SI DIODE *3 : 1SS133-T2
BW : BUS WIRE(0Ω)
OPT : NON-MOUNT(OPEN)

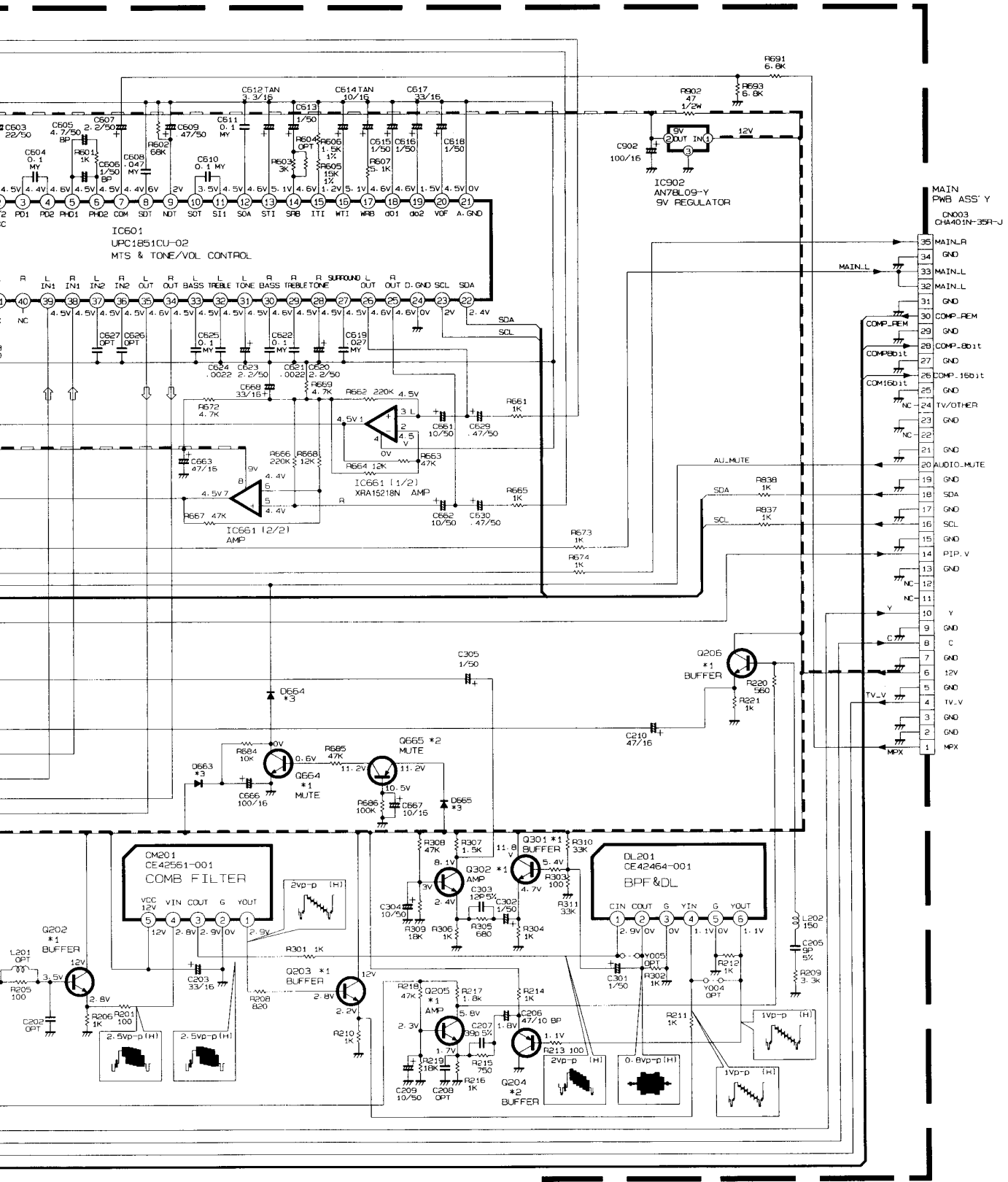
AV SELECTOR PWB CIRCUIT DIAGRAM



NOTE
*1 : 2SC1815(Y)-T
*2 : 2SA1015(Y)-T
*3 : 1SS133-T2
*4 : MTZJ12(C)-T2
BW : BUS WIRE
OPT : OPTION (NON MOUNT)

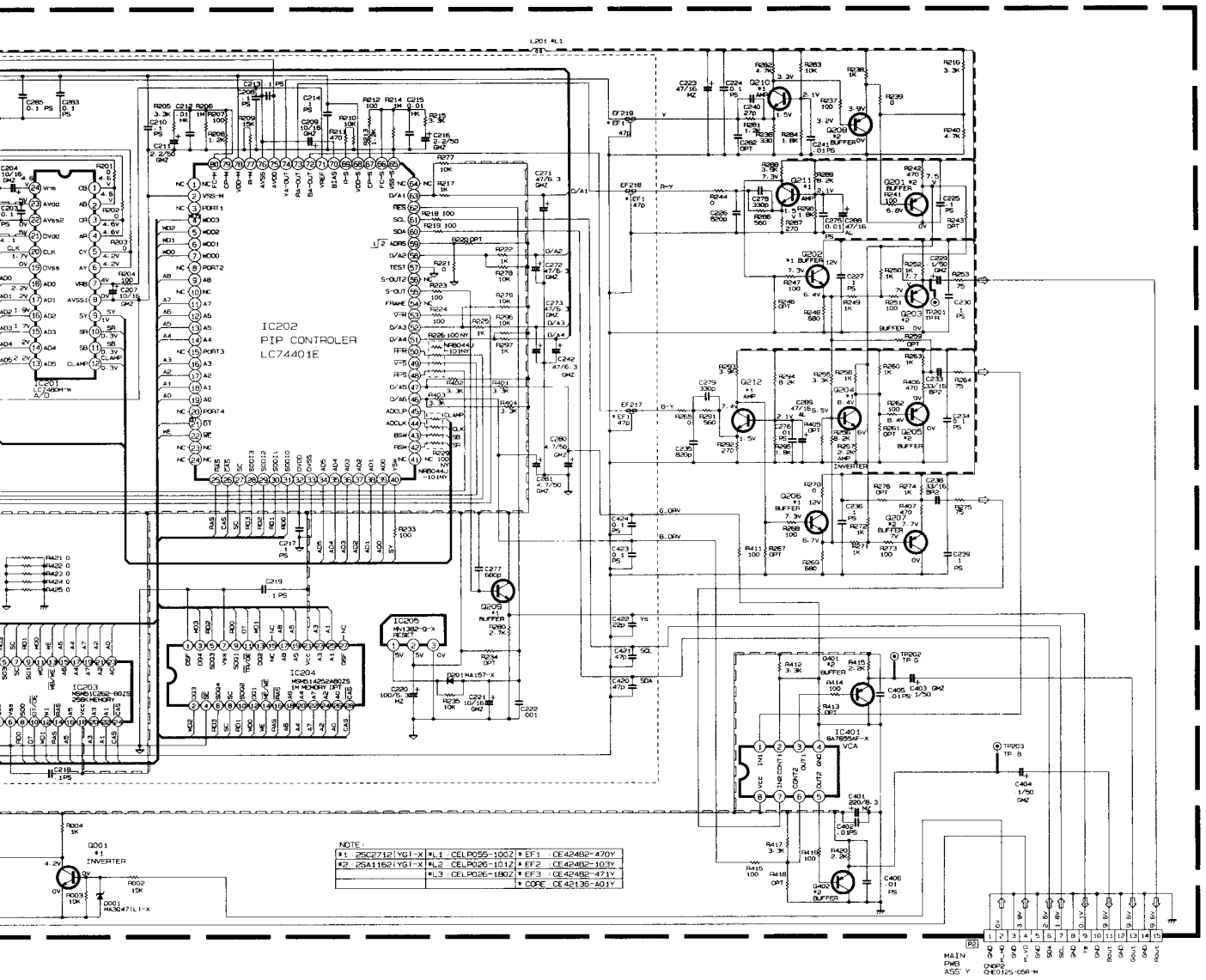
AV SELECTOR
SGK-8002A-H2

Refer to the following PWB pattern. : AV SELECTOR PWB PATTERN page 2-25.

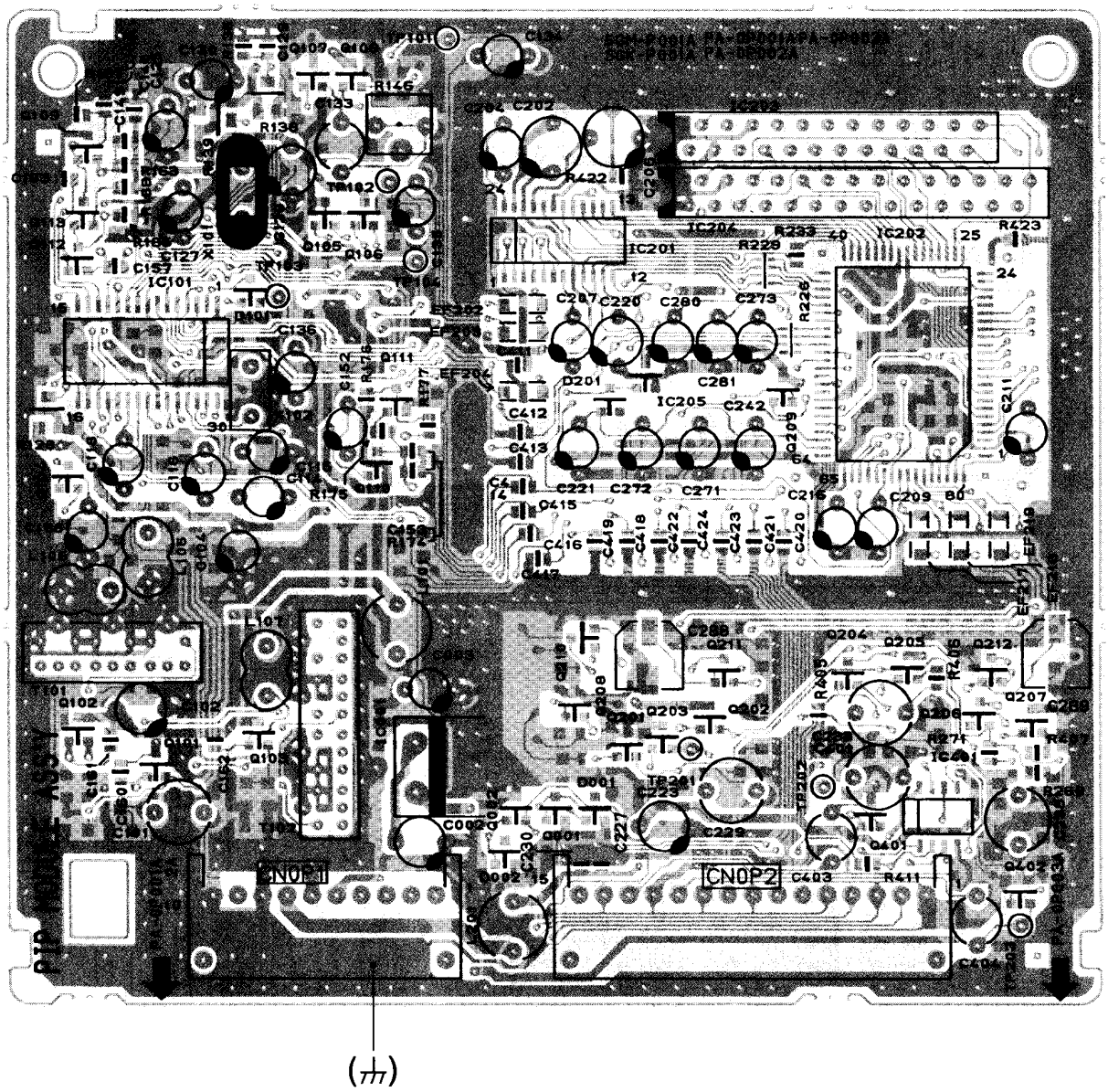


V SELECTOR PWB ASS'Y
GK-8002A-H2:[AV-35BP6(US/CA)]

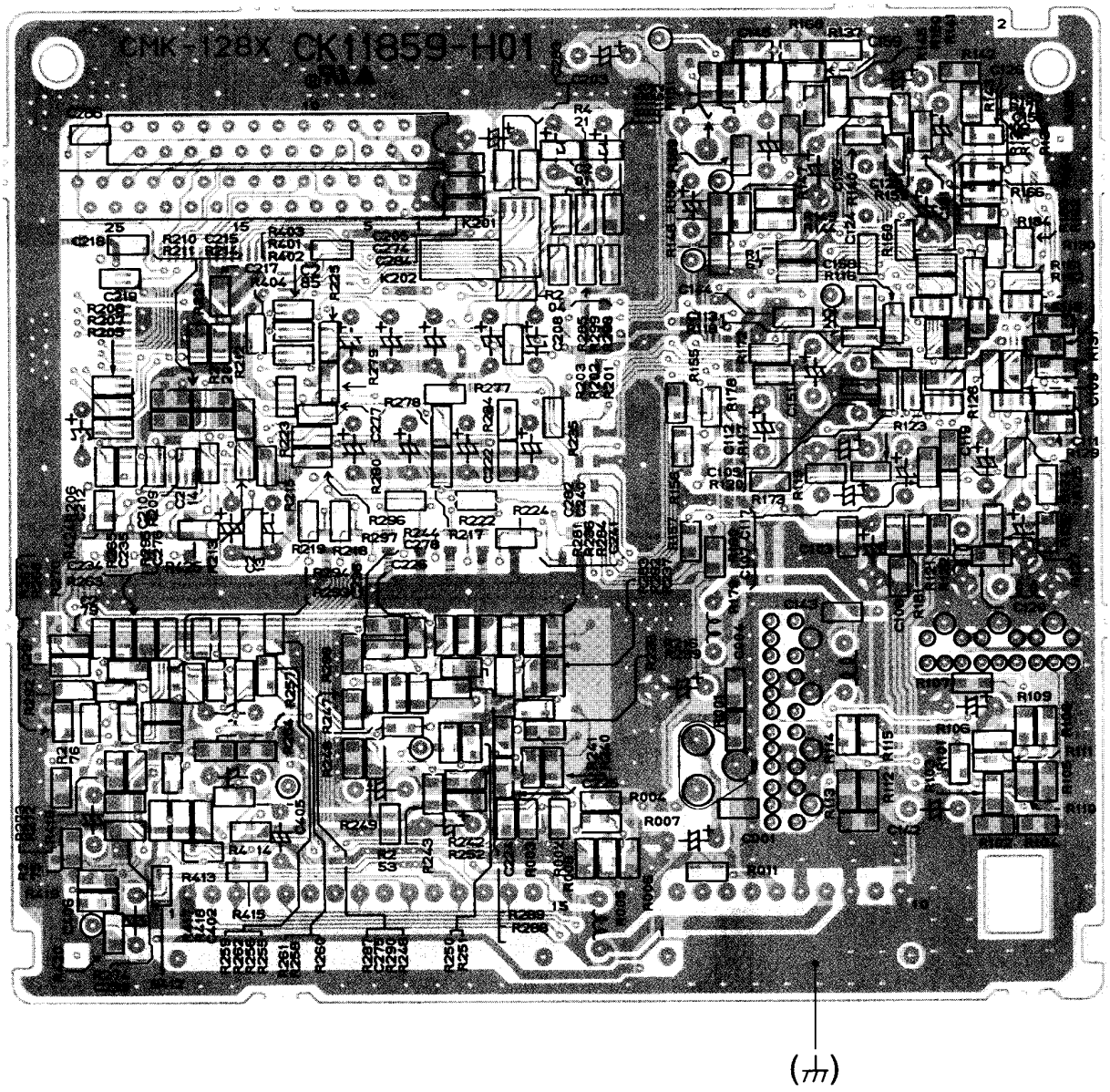
Refer to the following PWB pattern. : PIP MODULE PWB PATTERN page 2-19, 2-20.



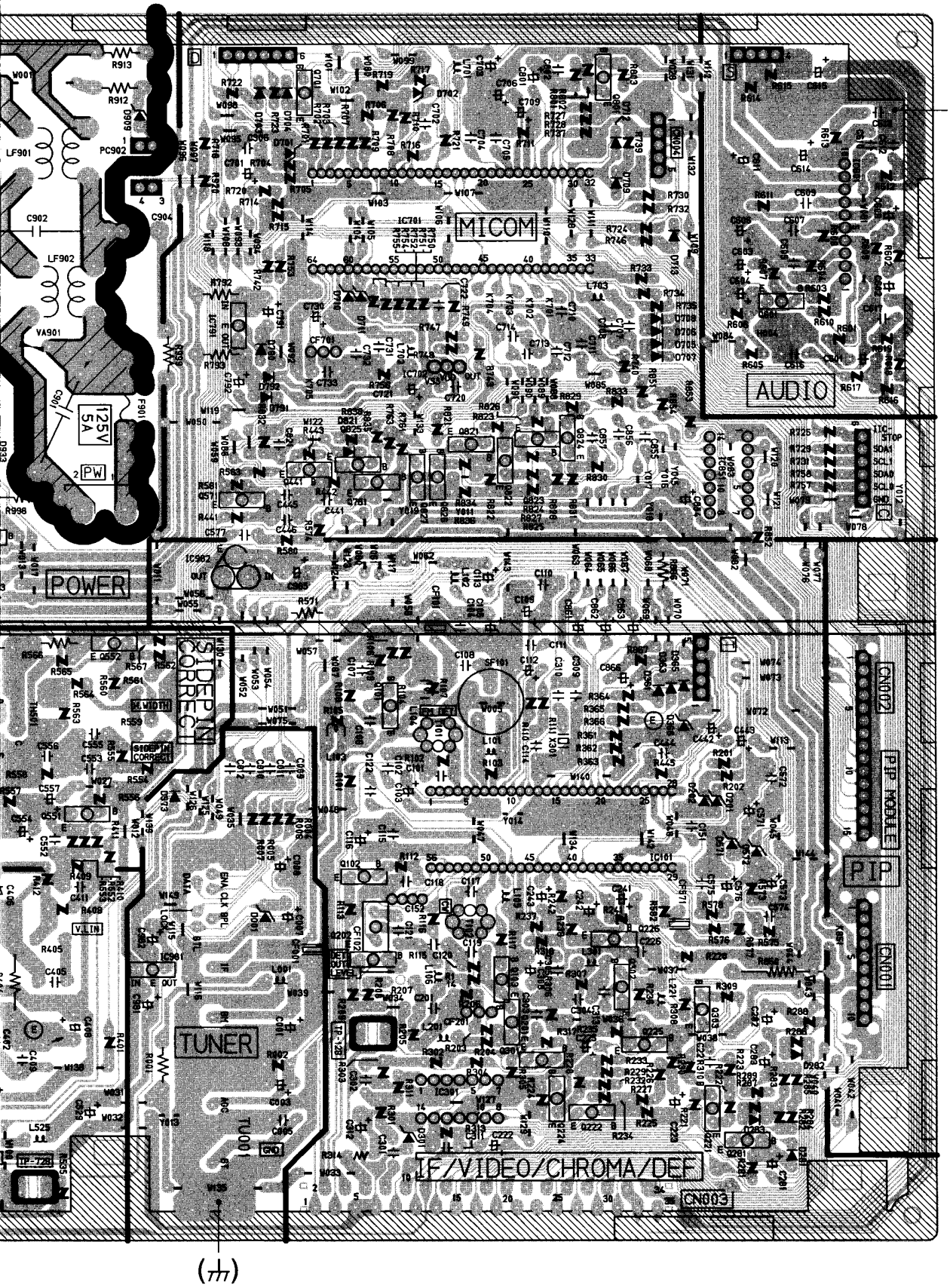
PIP MODULE PWB PATTERN [SGK-P001A-H2]



(Magnification Rate 150%)

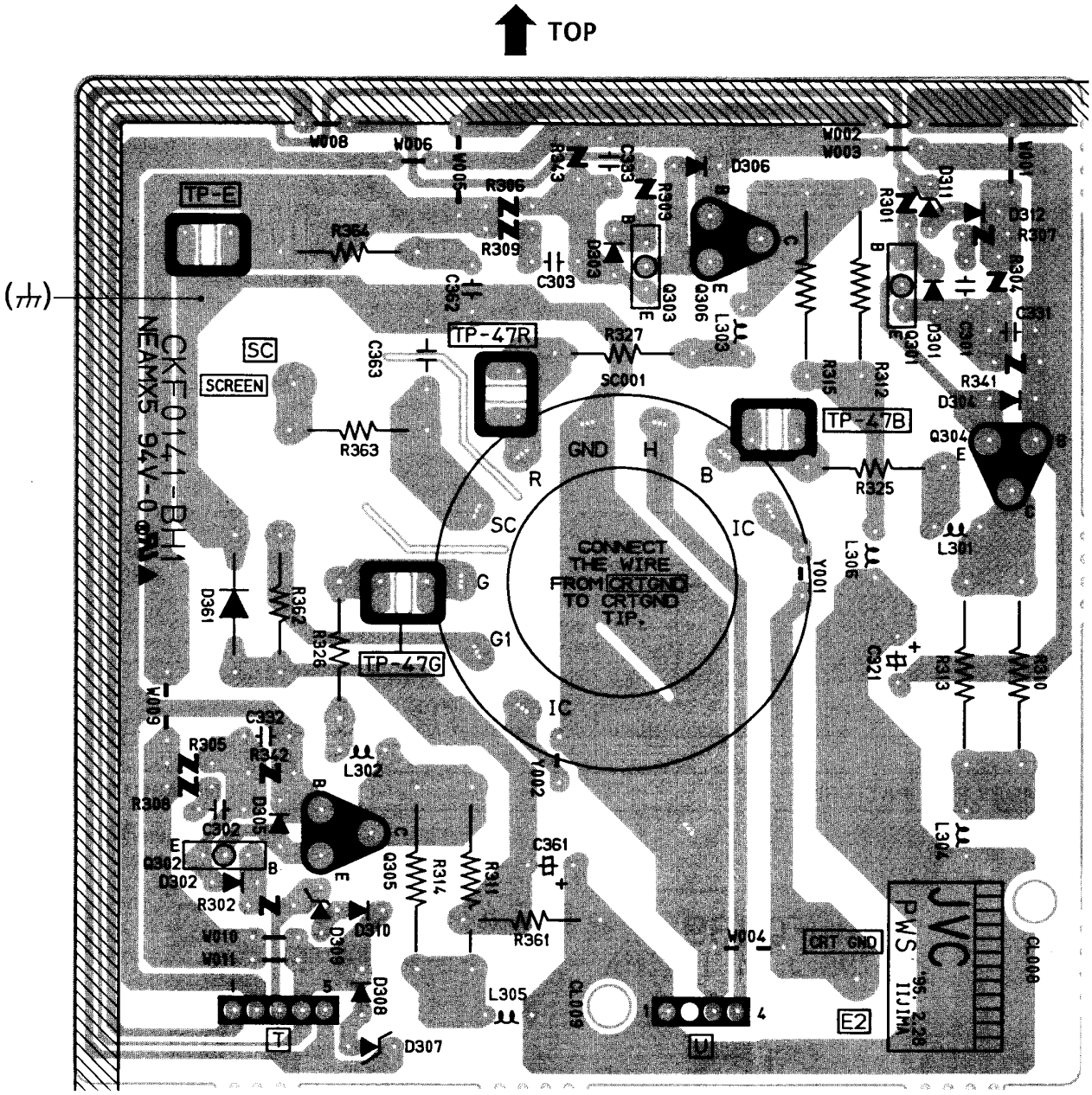


(Magnification Rate 92%)



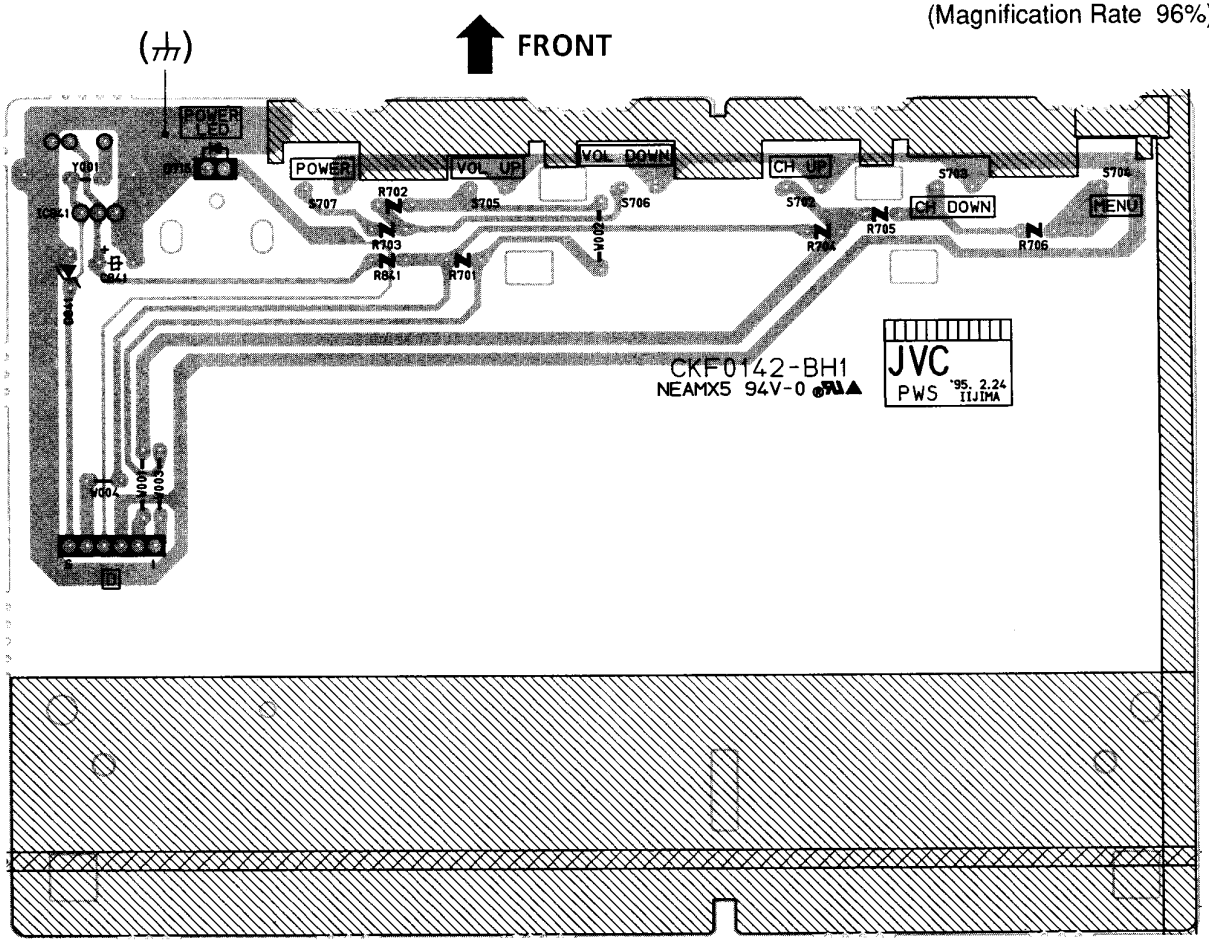
CRT SOCKET PWB PATTERN [SGK-3003A-H2]

(Magnification Rate 148%)



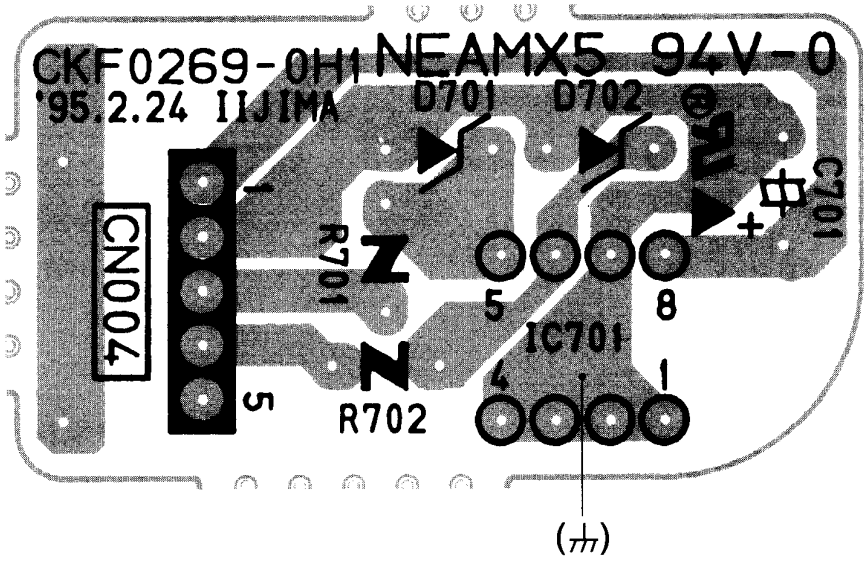
FRONT CONTROL PWB PATTERN [SGK-4001A-H2]

(Magnification Rate 96%)



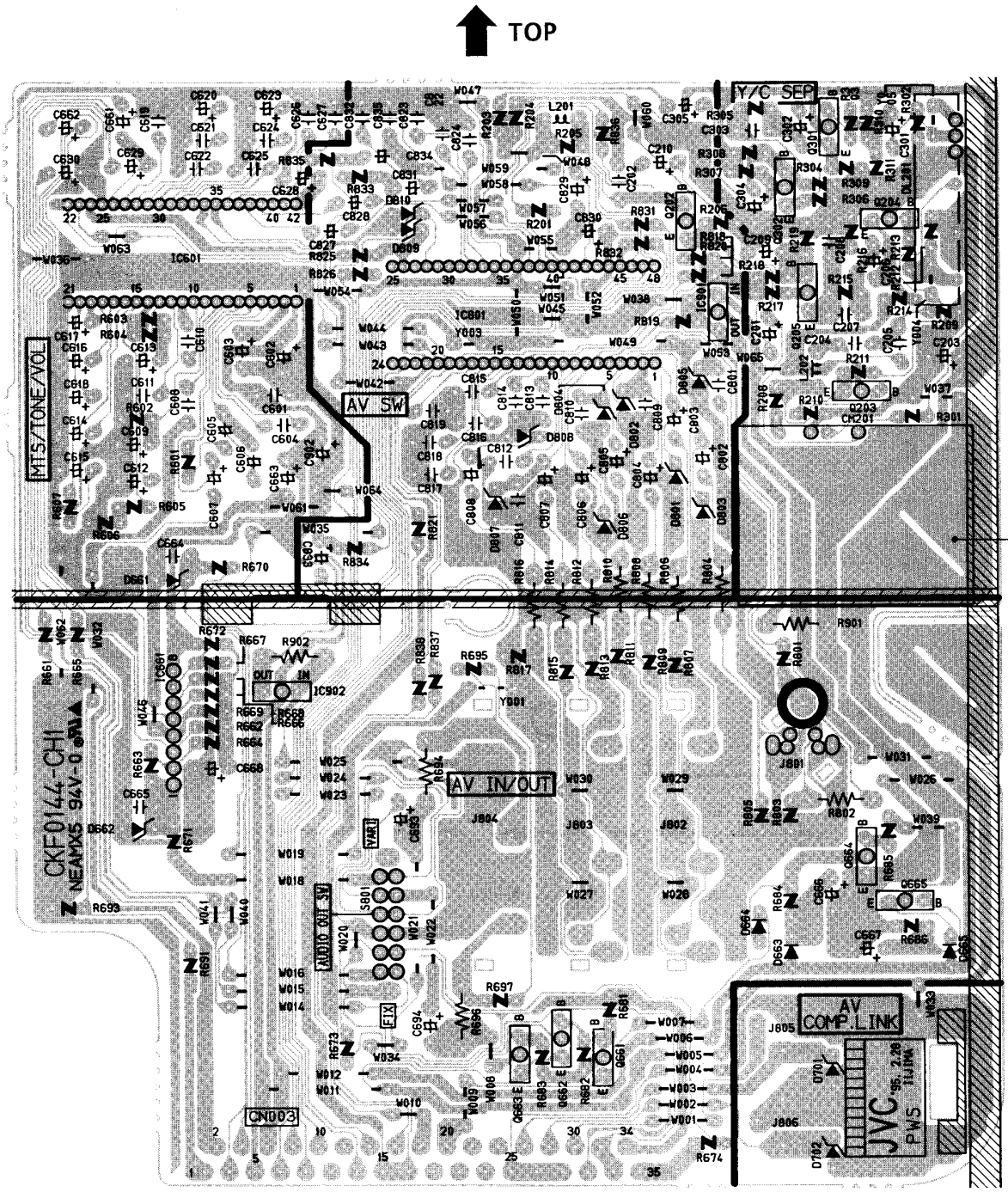
MEMORY PWB PATTERN [SGK0M001A-H2]

(Magnification Rate 302%)

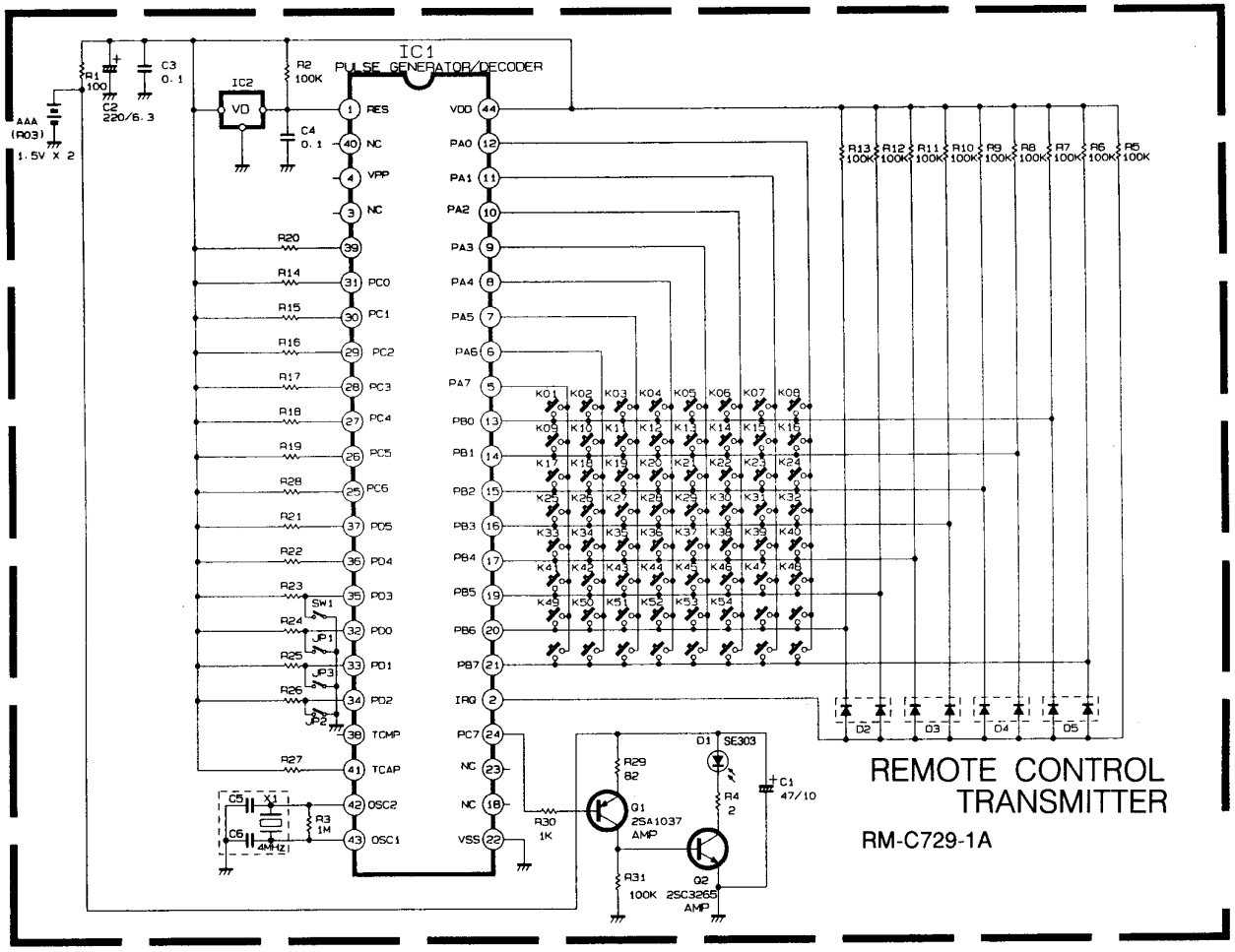


AV SELECTOR PWB PATTERN [SGK-8002A-H2]

(Magnification Rate 104%)



REMOTE CONTROL TRANSMITTER CIRCUIT DIAGRAM [RM-C729-1A]



● NOTE

REMOCON NO.	JP1	JP2	JP3
RM-C722	BW	OPEN	OPEN
RM-C723	BW	OPEN	OPEN
RM-C724	BW	OPEN	OPEN
RM-C725	OPEN	BW	OPEN
RM-C726	OPEN	OPEN	BW
RM-C728-1A	OPEN	OPEN	BW
➡ RM-C729-1A	BW	OPEN	OPEN
RM-C730	OPEN	BW	OPEN

* BW:BUS WIRE

● KEY FUNCTIONS

KEY NO.	FUNCTION	KEY NO.	FUNCTION
1	----	28	RETURN +
2	HYPER SURROUND	29	HYPER SCAN -
3	DISPLAY	30	CH -
4	POWER	31	CH +
5	----	32	HYPER SCAN +
6	PIP ON/OFF	33	MUTE
7	PIP POSISION	34	VOL -
8	PIP SWAP	35	VOL +
9	----	36	REW ◂◂
10	PIP SOURCE	37	PLAY ▸
11	PIP FREEZE	38	FF ▸▸
12	PIP SIZE	39	REC ●
13	CLOSED CAPTION	40	STOP ■
14	1	41	PAUSE ▮▮
15	2	42	VCR POWER
16	3	43	VCR CH -
17	THEATER/AVSTATUS	44	VCR CH +
18	4	45	HELP
19	5	46	----
20	6	47	----
21	SLEEP TIMER	48	EXIT
22	7	49	MENU ^
23	8	50	MENU ‹
24	9	51	MENU ›
25	TV/VIDEO	52	MENU ˇ
26	100+		
27	0		

(KEY NO. 6-NO. 12:NO USE RM-C728-1A)

VP
NP1238

PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines —— in the Parts No. columns will not be supplied .
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied .
- As a rule, the resistors and capacitors which are indicated as shown in "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board .
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" .

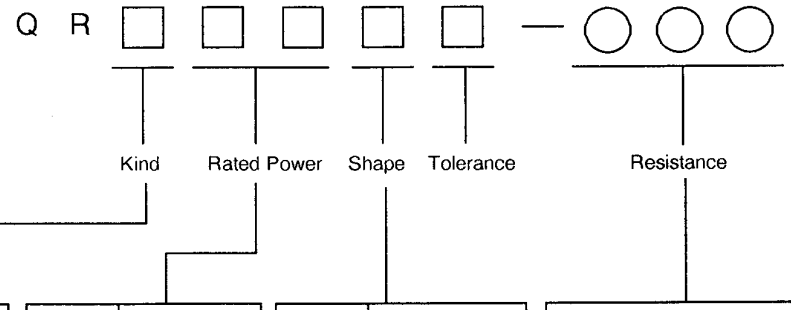
ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% - 10%	+50% - 10%	+80% - 20%	+100% - 0%

HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR



Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

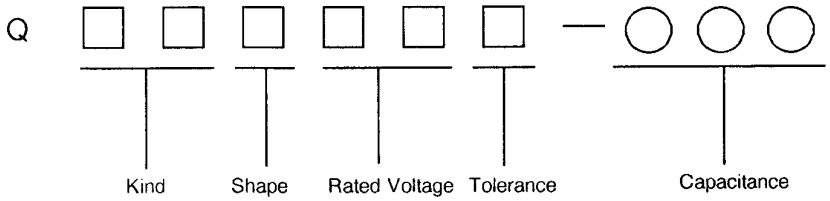
Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R"will be effective as point.

EX.

2.2 Ω	=			2R2
470 Ω	=	47×10^{1}	→	471
150kΩ	=	15×10^{4}	→	154

■ CAPACITOR



Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

6Figure \ 5Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX

5pF	=			5R0
1000pF	=	10×10^{2}	→	102
47μF	=	47×10^{6}	→	476

Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

CONTENTS

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■ REMOTE CONTROL UNIT PARTS LIST 39

■ PACKING 40
■ PACKING PARTS LIST
- America Model 40
- Canada Model 40

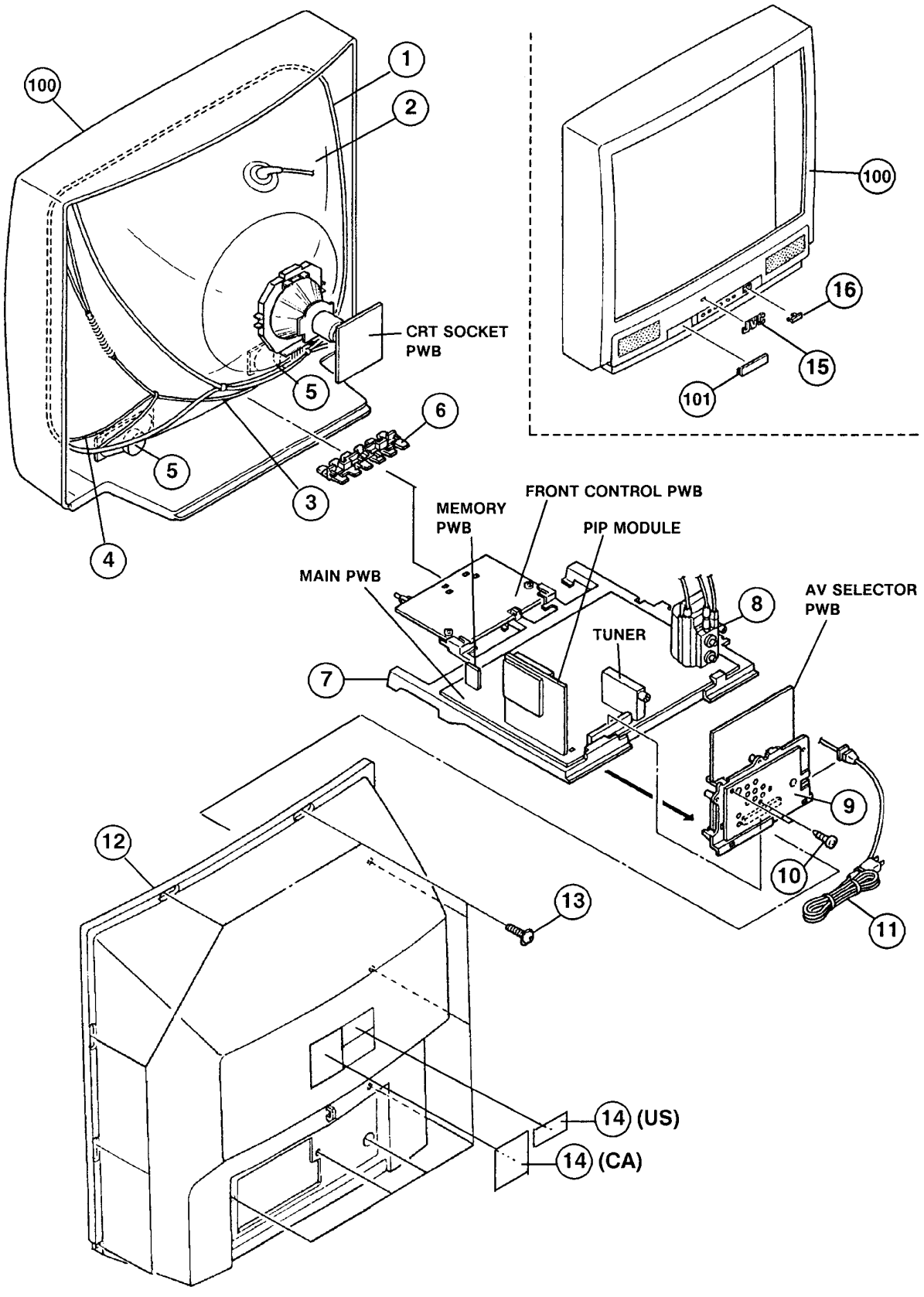
USING P.W. BOARD

Model / P.W.B ASS'Y	AV-35BP6(US&CA)
MAIN P.W.B	SGK-1005A-H2
CRT SOCKET P.W.B	SGK-3003A-H2
FRONT CONTROL P.W.B	SGK-4001A-H2
AV SELECTOR P.W.B	SGK-8002A-H2
MEMORY P.W.B	SGK0M001A-H2
PIP MODULE P.W.B	SGK-P001A-H2

EXPLODED VIEW PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
⚠	1	CELD032-001J3	DEG. COIL	L01	*
⚠	2	A89AEJ15X01	PICTURE TUBE	V01 (Inc.DY,PC MAGNET,WEDGE)	*
	3	CHGB0009-0D-FA	BRAIDED ASSY		*
	4	CHGB0016-0D-FA	BRAIDED ASSY	(×2)	*
⚠	5	CEBSS12D-02J2	SPEAKER	(×2)SP01,SP02	*
	6	CM35776-A01-H	PUSH KNOB		*
	7	CM12689-B01-VA	CHASSIS BASE		*
⚠	8	CJ28212-00AJ1	H V TRANSF.	T1502	*
⚠	9	CM22781-A01-VH	TERMINAL BOARD		*
	10	SBSB3010Z	TAPPING SCREW	(×2)	*
⚠	11	QMP14G0-185J3	POWER CORD		*
⚠	12	CM12634-B02-MA	REAR COVER		*
	13	GBSB4016N	TAPPING SCREW	(×11)	*
⚠	14	CM48088-002-A	RATING LABEL	(US)	*
⚠	14	CM48051-001-A	RATING LABEL	(CA)	*
	15	CM46084-A01	BRAND MARK		*
	16	CM35983-001-H	REMOCON WINDOW		*
⚠	100	CM12747-00B-MA	FRONT CABI.ASSY	Inc.No.101	*
	101	CM36162-B02-A	DOOR		*

EXPLODED VIEW



PRINTED WIRING BOARD PARTS LIST

MAIN PW BOARD ASS'Y (SGK-1005A-H2)

⚠	Symbol No.	Part No.	Part Name	Description			Local
	V A R I A B L E R E S I S T O R						
	R1207	QVPE611-501HZ	V R(DET OUT LEVEL)	500 Ω	B		
	R1559	QVPE611-203HZ	V R(SIDEPIN CORRECT)	20k Ω	B		
	R1561	QVPE611-502HZ	V R(H.WIDTH)	5k Ω	B		
	R E S I S T O R						
	R1001	QRD129J-4R7S	C R	4.7 Ω	1/2W	J	
	R1314	QRD123J-221SX	C R	220 Ω	1/2W	J	
	R1404	QRX029J-1R2A	MF R	1.2 Ω	2W	J	
	R1504-05	QRG029J-152	OM R	1.5k Ω	2W	J	
	R1513	QRG039J-103A	OM R	10k Ω	3W	J	
	R1521	QRD129J-150S	C R	15 Ω	1/2W	J	
	R1522-23	QRX019J-1R0S	MF R	1.0 Ω	1W	J	
	R1524	QRD129J-4R7S	C R	4.7 Ω	1/2W	J	
	R1530	QRG039J-153A	OM R	15k Ω	3W	J	
⚠	R1535	QRV141F-3921AY	MF R	3.92k Ω	1/4W	F	
⚠	R1537	QRV141F-6801AY	MF R	6.8k Ω	1/4W	F	
	R1551	QRG039J-100A	OM R	10 Ω	3W	J	
	R1571	QRD149J-101S	C R	100 Ω	1/4W	J	
	R1794	QRV141F-2200AY	MF R	220 Ω	1/4W	F	
	R1860	QRG029J-180	OM R	18 Ω	2W	J	
⚠	R1901	QRF074K-R47	UNF R	0.47 Ω	7W	K	
	R1903	QRX029J-R33A	MF R	0.33 Ω	2W	J	
	R1904	QRX029J-R39A	MF R	0.39 Ω	2W	J	
	R1905	QRG019J-120S	OM R	12 Ω	1W	J	
	R1906	QRD149J-1R0S	C R	1.0 Ω	1/4W	J	
	R1907	QRD149J-330S	C R	33 Ω	1/4W	J	
	R1909	QRD149J-222S	C R	2.2k Ω	1/4W	J	
	R1910	QRD149J-102S	C R	1k Ω	1/4W	J	
	R1911	QRX129J-R47A	MF R	0.47 Ω	1/2W	J	
⚠	R1998	QRZ0111-275U	C R	2.7M Ω	1/2W	J	
	C A P A C I T O R						
	C1005	QFLC1HK-103MZ	M CAP.	0.01 μ F	50V	K	
	C1101	QCT25CH-820AZ	C CAP.	82 p F	50V	J	
	C1114	QFLC1HK-223MZ	M CAP.	0.022 μ F	50V	K	
	C1117	QCT25CH-270AZ	C CAP.	27 p F	50V	J	
	C1124	QFLC1HK-473MZ	M CAP.	0.047 μ F	50V	K	
	C1152	CECN004-102	NET CAP.	1000 p F			
	C1221	QFLC1HK-104MZ	M CAP.	0.1 μ F	50V	K	
	C1310	QCT25CH-100AZ	C CAP.	10 p F	50V	J	
	C1404	QETC1VM-107Z	E CAP.	100 μ F	35V	M	
	C1405	QFV71HJ-474MZ	TF CAP.	0.47 μ F	50V	J	
	C1407	QFLC2AK-563MZ	M CAP.	0.056 μ F	100V	K	
	C1408	QETC1VM-477Z	E CAP.	470 μ F	35V	M	
	C1409	QFLC1HK-103MZ	M CAP.	0.01 μ F	50V	K	
	C1411	QFV71HJ-224MZ	TF CAP.	0.22 μ F	50V	J	
	C1441	QFLC1HJ-563MZ	M CAP.	0.056 μ F	50V	J	
	C1444	QFN31HK-102ZJ1	M CAP.	1000 p F	50V	K	
	C1445	QCT25CH-820AZ	C CAP.	82 p F	50V	J	
	C1446	QFN31HJ-222ZJ1	M CAP.	2200 p F	50V	J	
	C1503	QETC2CM-105Z	E CAP.	1 μ F	160V	M	
⚠	C1511	QFZ0117-3501S	MPP CAP.	3500 p F	1.4kVH	±2.5%	
⚠	C1512	QFZ0117-1202S	MPP CAP.	0.012 μ F	1.4kVH	±2.5%	
⚠	C1514	QFP32GJ-223M	PP CAP.	0.022 μ F	400V	J	
⚠	C1515	QFZ0119-754S	MPP CAP.	0.75 μ F	200V	±3%	
	C1517	QEH62EM-225MZ	E CAP.	2.2 μ F	250V	M	
	C1518-19	QEM61HK-475MZ	E CAP.	4.7 μ F	50V	K	
	C1521	QETB2EM-336	E CAP.	33 μ F	250V	M	
	C1522	QETB1VM-108	E CAP.	1000 μ F	35V	M	
	C1524	QETC1VM-107Z	E CAP.	100 μ F	35V	M	
	C1525	QFLC2AJ-393MZ	M CAP.	0.039 μ F	100V	J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C1526	QFV71HJ-473MZ	TF CAP.	0.047 µF 50V	J
C1553	QFLC1HK-683MZ	M CAP.	0.068 µF 50V	K
C1554	QETC0JM-477Z	E CAP.	470 µF 6.3V	M
C1555	QFLC1HK-683MZ	M CAP.	0.068 µF 50V	K
C1557	QETC1VM-476Z	E CAP.	47 µF 35V	M
C1559	QEZ0203-107	E CAP.	100 µF 160V	
C1603	QETC0JM-107Z	E CAP.	100 µF 6.3V	M
C1608	QETC0JM-107Z	E CAP.	100 µF 6.3V	M
C1609-10	QFLC1HK-823MZ	M CAP.	0.082 µF 50V	K
C1612-13	QFV71HJ-104MZ	TF CAP.	0.1 µF 50V	J
C1616-17	QFV71HJ-224MZ	TF CAP.	0.22 µF 50V	J
C1704	QFLC1HK-683MZ	M CAP.	0.068 µF 50V	K
C1731	QFLC1HK-683MZ	M CAP.	0.068 µF 50V	K
C1732-33	QCT25CH-330AZ	C CAP.	33 p F 50V	J
C1855-57	QFLC1HJ-104MZ	M CAP.	0.1 µF 50V	J
⚠ C1901	QFZ9036-104M	MF CAP.	0.1 µ FAC250V	M
⚠ C1902	QFZ9036-473M	MF CAP.	0.047 µ FAC250V	M
⚠ C1903	QFZ9036-473M	MF CAP.	0.047 µ FAC250V	M
⚠ C1904	QCZ9052-102A	C CAP.	1000 p FAC125V	
⚠ C1906	QCZ9033-102A	C CAP.	1000 p FAC250V	K
⚠ C1907	QCZ9033-102A	C CAP.	1000 p FAC250V	K
⚠ C1908	QCZ9033-102A	C CAP.	1000 p FAC250V	K
⚠ C1910	QEZ0169-477	E CAP.	470 µF 200V	M
C1911	QCZ0116-152AZ	C CAP.	1500 p F 1000V	K
C1917	QETC2AM-106Z	E CAP.	10 µF 100V	M
C1921	QCZ0132-152AZ	C CAP.	1500 p F 500V	K
C1924	QEZ0203-107	E CAP.	100 µF 160V	
⚠ C1999	QCZ9052-222A	C CAP.	2200 p FAC125V	
TRANSFORMER				
T1101	CELT003-104J1	SIF TRANSF.		
T1102	CELT001-208J1	CW TRANSF.		
T1501	CE42034-002	H.DRIVE TRANSF.		
⚠ T1901	CETS022-001J1	SW TRANSF		
COIL				
L1001	CELP055-271Z	PEAKING COIL	270 µH	
L1101	CELP041-R82	PEAKING COIL	0.82 µH	
L1102	CELP055-680Z	PEAKING COIL	68 µH	
L1104	CELP043-R47	PEAKING COIL	0.47 µH	
L1105	CELP055-680Z	PEAKING COIL	68 µH	
L1106	CELP055-220Z	PEAKING COIL	22 µH	
L1201	CELP055-220Z	PEAKING COIL	22 µH	
L1221	CELP055-6R8Z	PEAKING COIL	6.8 µH	
L1301	CELP055-100	PEAKING COIL	10 µH	
⚠ L1511	CELL013-002	LINIARITY COIL		
⚠ L1512	CELC053-801	CHOKE COIL		
⚠ L1521	CELC901-041J6	HEATER CHOKE		
L1525	CELC058-820Z	CHOKE COIL		
L1701-02	CELP055-4R7Z	PEAKING COIL	4.7 µH	
L1921-22	CELC058-820Z	CHOKE COIL		
DIODE				
D1001	MTZJ36(A)-T2	ZENER DIODE		
D1201-02	MTZJ5.6(A)-T2	ZENER DIODE		
D1281-83	1SS133-T2	SI.DIODE		
D1301	MTZJ5.1(A)-T2	ZENER DIODE		
D1361	1SS133-T2	SI.DIODE		
D1363	1SS133-T2	SI.DIODE		
D1365	1SS133-T2	SI.DIODE		
D1366	MTZJ15(C)-T2	ZENER DIODE		
D1401	1N4003-T2	SI.DIODE		
D1402-03	MTZJ36(A)-T2	ZENER DIODE		
D1404	MTZJ9.1(B)-T2	ZENER DIODE		
D1501	RH3G-C1	SI.DIODE		
D1502	RU3AM-LFC4	SI.DIODE		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	D I O D E				
	D1521	RH1S-T3	SI.DIODE		
	D1522	1SR124-400A-T2	SI.DIODE		
	D1523	RU3AM-LFC4	SI.DIODE		
	D1524	1SS81-T2	SI.DIODE		
	D1526	1SR124-400A-T2	SI.DIODE		
	D1529	MTZJ9.1(B)-T2	ZENER DIODE		
	D1530	RGP10J(C1)-T3	SI.DIODE		
	D1571	MTZJ9.1(B)-T2	ZENER DIODE		
⚠	D1572	MTZJ7.5S-T2	ZENER DIODE		
⚠	D1573	1SS133-T2	SI.DIODE		
	D1703-04	1SS133-T2	SI.DIODE		
	D1710-11	MTZJ5.6(A)-T2	ZENER DIODE		
	D1712-13	1SS133-T2	SI.DIODE		
	D1791-92	1SS133-T2	SI.DIODE		
	D1821	1SS133-T2	SI.DIODE		
⚠	D1901	D3SBA60-C1	BRIDGE DIODE		
	D1902	1SR124-400A-T2	SI.DIODE		
	D1904	AG01Z-T2	SI.DIODE		
	D1905	1SR124-400A-T2	SI.DIODE		
	D1907	1SR124-400A-T2	SI.DIODE		
	D1909	MTZJ15(A)-T2	ZENER DIODE		
	D1911	1SS133-T2	SI.DIODE		
	D1921	RU30A-C1	SI.DIODE		
	D1922	RGP10J(C1)-T3	SI.DIODE		
	D1923	EL1Z-LFF6	SI.DIODE		
	D1924	1SR35-100A-T2	SI.DIODE		
	D1926-28	1SS133-T2	SI.DIODE		
	D1933	1SS133-T2	SI.DIODE		
	T R A N S I S T O R				
	Q1101	2SC5083(L-P)-T	SI.TRANSISTOR		
	Q1102-03	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1201-02	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1221-22	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1224	2SA1015(Y)-T	SI.TRANSISTOR		
	Q1225	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1226	2SA1015(Y)-T	SI.TRANSISTOR		
	Q1281	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1301-03	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1441	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1501	2SC4212-C1	SI.TRANSISTOR		
⚠	Q1511	2SD2539-LB	POWER TRANSISTOR	H.OUT	
	Q1551	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1552	2SA1309A(QR)-T	SI.TRANSISTOR		
	Q1553	2SD1408(OY)-LB	POWER TRANSISTOR		
	Q1571	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1601	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1701	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1801	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1821-27	2SC1815(Y)-T	SI.TRANSISTOR		
	Q1921-22	DTC114YS-T	DIGI.TRANSISTOR		
	Q1923	2SA966(OY)-T	SI.TRANSISTOR		
	Q1924	DTC114YS-T	DIGI.TRANSISTOR		
	Q1926	2SA1015(Y)-T	SI.TRANSISTOR		
	I C				
	IC1101	TA1201ANV	I.C.		
	IC1301	TC4066BP	I.C.(DIGI-MOS)		
⚠	IC1401	UPC1498H	I.C.(MONO-ANA)		
⚠	IC1601	LA4261	I.C.(MONO-ANA)		
	IC1701	MN1874862JKY4	I.C.		
	IC1702	MN1280-Q	I.C.(DIGI-MOS)		
	IC1791	AN78L05-Y	I.C.		
	IC1851	AN5860	I.C.(M)		

⚠ Symbol No.	Part No.	Part Name	Description	Local
I C				
⚠ IC1901	STR-S5708	I.C.		
IC1981	AN78L05-Y	I.C.		
IC1982	XRA17809T	I.C.(MONO-ANA)		
O T H E R S				
	CM47653-001	PCB HOLDER		
CF1001	FTP47.25MF	CERAMIC TRAP		
CF1102	SFSH4.5MCB-Z	CERAMIC FILTER		
CF1201-02	CE41505-001	CERAMIC FILTER		
CF1571	CSB503F30-T2	C RESONATOR		
CF1701	CSA12.0MT	CER.RESONATOR		
CN1003	CHA401N-35P-J	HQF CONNECTOR		
⚠ F1901	QMF0007-5R0J1	FUSE	5A	
K1401	CE42050-001Z	CORE		
K1701-04	CE42050-001Z	CORE		
K1902	CE41433-001Z	BEADS CORE		
K1921	CE41433-001Z	BEADS CORE		
⚠ LF1901	CELF001-001J1	LINE FILTER		
⚠ LF1902	CE42335-001J1	LINE FILTER		
⚠ PC1901	TLP621(GB)	I.C.(PH COUPLER)		
⚠ PC1902	TLP621(GB)	I.C.(PH COUPLER)		
⚠ RY1901	CESK028-001	RELAY		
⚠ RY1921	CESK028-001	RELAY		
S1401	QSL6A13-C01	LEVER SWITCH	V.CENTER SW	
SF1101	CE41706-201	SAW FILTER		
TH1501	CEKP004-001	P.THERMISTOR		
⚠ TH1901	CEKP007-001	P.THERMISTOR		
⚠ TU1001	CEEM245-B03	TUNER		
⚠ VA1901	ERZ-C10VK361G	VARISTOR		
X1301	CE41651-001Z	X-TAL		

CRT SOCKET PW BOARD ASS'Y (SGK-3003A-H2)

⚠ Symbol No.	Part No.	Part Name	Description	Local
R E S I S T O R				
R3310-15	QRG029J-153	OM R	15k Ω 2W J	
C A P A C I T O R				
C3321	QETC2EM-105Z	E CAP.	1 μ F 250V M	
C3361	QETC2EM-105Z	E CAP.	1 μ F 250V M	
C3363	QCZ0121-102A	C CAP.	1000 p F 3kV Z	
C O I L				
L3301-03	CELP055-180Z	PEAKING COIL	18 μ H	
L3304-06	CELP055-470Z	PEAKING COIL	47 μ H	
D I O D E				
D3301-03	1SS133-T2	SI.DIODE		
D3304-06	1SS244-T2	SI.DIODE		
D3307	MTZJ4.7(A)-T2	ZENER DIODE		
D3308	1SS133-T2	SI.DIODE		
D3309	MTZJ4.7(A)-T2	ZENER DIODE		
D3310	1SS133-T2	SI.DIODE		
D3311	MTZJ4.7(A)-T2	ZENER DIODE		
D3312	1SS133-T2	SI.DIODE		
T R A N S I S T O R				
Q3301-03	2SC5083(L-P)-T	SI.TRANSISTOR		
Q3304-06	2SC4544-C1	SI.TRANSISTOR		
O T H E R S				
⚠ SC3001	CE42535-001J1	CRT SOCKET		

FRONT CONTROL PW BOARD ASS'Y (SGK-4001A-H2)

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D4715	GL2PR6	L.E.D.(RED)		
I C				
IC4841	TFMS5380ESN	IR DETECT UNIT		
O T H E R S				
	CM46978-A01-H	L.E.D.HOLDER		
S4702	QSP1A11-C19Z	PUSH SWITCH	LEVEL +	
S4703	QSP1A11-C19Z	PUSH SWITCH	LEVEL -	
S4704	QSP1A11-C19Z	PUSH SWITCH	MENU	
S4705	QSP1A11-C19Z	PUSH SWITCH	VOL +	
S4706	QSP1A11-C19Z	PUSH SWITCH	VOL -	
S4707	QSP1A11-C19Z	PUSH SWITCH	POWER	

AV SELECTOR PW BOARD ASS'Y (SGK-8002A-H2)

⚠ Symbol No.	Part No.	Part Name	Description			Local
R E S I S T O R						
R8605	QRV141F-1502AY	MF R	15kΩ	1/4W	F	
R8606	QRV141F-1501AY	MF R	1.5kΩ	1/4W	F	
C A P A C I T O R						
C8206	QEN61CM-476Z	BP E CAP.	47μF	16V	M	
C8604	QFLC1HK-104MZ	M CAP.	0.1μF	50V	K	
C8605	QEN61HM-475Z	BP E CAP.	4.7μF	50V	M	
C8606	QEN61HM-105Z	BP E CAP.	1μF	50V	M	
C8608	QFLC1HK-473MZ	M CAP.	0.047μF	50V	K	
C8610-11	QFLC1HK-104MZ	M CAP.	0.1μF	50V	K	
C8612	QEE61CK-335BZ	TAN.CAP.	3.3μF	16V	K	
C8614	QEE61CK-106BZ	TAN.CAP.	10μF	16V	K	
C8619	QFLC1HK-273MZ	M CAP.	0.027μF	50V	K	
C8622	QFLC1HK-104MZ	M CAP.	0.1μF	50V	K	
C8625	QFLC1HK-104MZ	M CAP.	0.1μF	50V	K	
C8666	QEKC1CM-107MZ	E CAP.	100μF	16V	M	
C8667	QEKC1CM-106GMZ	E CAP.	10μF	16V	M	
C8668	QEKC1CM-336MZ	E CAP.	33μF	16V	M	
C8693-94	QEKC1HM-105GMZ	E CAP.	1μF	50V	M	
C8827-28	QEN61CM-106Z	BP E CAP.	10μF	16V	M	
C8831	QEN61HM-335Z	BP E CAP.	3.3μF	50V	M	
C8833	QEKC1CM-106GMZ	E CAP.	10μF	16V	M	
C8834	QEN61HM-335Z	BP E CAP.	3.3μF	50V	M	
C O I L						
L8201	CELP055-220Z	PEAKING COIL	22μH			
L8202	CELP055-121Z	PEAKING COIL	120μH			
D I O D E						
D8661-62	MTZJ9.1(B)-T2	ZENER DIODE				
D8663-65	1SS133-T2	SI.DIODE				
D8701-02	MTZJ6.8(A)-T2	ZENER DIODE				
D8801-10	MTZJ12(C)-T2	ZENER DIODE				
T R A N S I S T O R						
Q8202-03	2SC1815(Y)-T	SI.TRANSISTOR				
Q8204	2SA1015(Y)-T	SI.TRANSISTOR				
Q8205	2SC1815(Y)-T	SI.TRANSISTOR				
Q8301-02	2SC1815(Y)-T	SI.TRANSISTOR				
Q8661	2SA1015(Y)-T	SI.TRANSISTOR				
Q8662-63	DTC323TS-T	DIGI.TRANSISTOR				
Q8664	2SC1815(Y)-T	SI.TRANSISTOR				
Q8665	2SA1015(Y)-T	SI.TRANSISTOR				

⚠ Symbol No.	Part No.	Part Name	Description	Local
I C				
IC8601	UPC1851CU-02	I.C.		
IC8661	XRA15218N	I.C.(MONO-ANA)		
IC8801	CXA1545AS	I.C.		
IC8901-02	AN78L09-Y	I.C.		
O T H E R S				
CM8201	CE42561-001	COMB FILTER MOD		
CN8003	CHA401N-35R-J	HQF CONNECTOR		
DL8201	CE42464-001	BPF&DL MODULE		
J8801	QMCC008-C01	DIN JACK		
J8802-03	CEMN073-001	PIN JACK		
J8804	CEMN057-001	PIN JACK		
J8805-06	AX49607-020	MINI JACK		
S8801	QSS1F42-C01	SLIDE SWITCH	VARI/FIX SW	

MEMORY PW BOARD ASS'Y (SGK0M001A-H2)

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D1701-02	MTZJ5.6(A)-T2	ZENER DIODE		
I C				
IC1701	AT24C04-GK	I.C.		

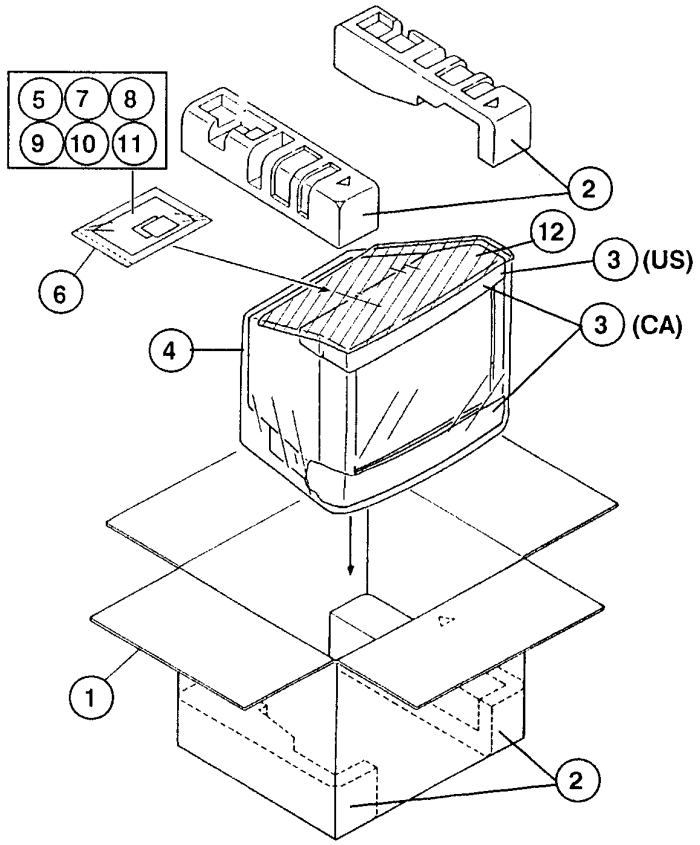
PIP MODULE PW BOARD ASS'Y (SGK-P001A-H2)

⚠ Symbol No.	Part No.	Part Name	Description	Local
	SGK-P001A-H2	PIP PB ASSY		

REMOTE CONTROL UNIT PARTS LIST (RM-C729-1A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
	103RRC-049-01AR	BATTERY COVER		

PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
[America model]					
	1	CP10972-085-A	PACKING CASE		*
	2	CP11387-00B-A	CUSHION ASSY	4pcs in 1set	*
	3	CP30055-002-A	TOP COVER		*
	4	CP30056-004-A	POLY BAG		*
	5	RM-C729-1A	REMOCON UNIT		*
	6	CM30751-010	POLY BAG		*
⚠	7	273135UC-IBA-A	INST BOOK	ENGLISH	*
	9	BT-51006-2-A	REGI.CARD		*
[Canada model]					
	1	CP10972-085-A	PACKING CASE		*
	2	CP11387-00B-A	CUSHION ASSY	4pcs in 1set	*
	3	CP30055-002-A	TOP COVER	(×2)	*
	4	CP30056-004-A	POLY BAG		*
	5	RM-C729-1A	REMOCON UNIT		*
	6	CM30751-010	POLY BAG		*
⚠	7	273135UC-IBA-A	INST BOOK	ENGLISH	*
⚠	8	273135C-IBA-A	INST.BOOK(F)	FRENCH	*
	10	BT-52002-1A	WARRANTY CARD		*
	11	BT-20071B-A	SVC CENTER LIST		*
	12	CP30341-001-A	PROTECT SHEET		*

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